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NOJC Show Issue

November, 1981

## Majors to Spend Millions on New Image Kick

## Are Costly Driveway Promotions Coming Back?

## Sigmor's Tom Turner Makes NPN's Hall of Fame

# NPN

**National Petroleum News**

A PUBLICATION FOR MARKETING MANAGEMENT • OPERATIONS • FUEL OIL • TBA/AFTERMARKET

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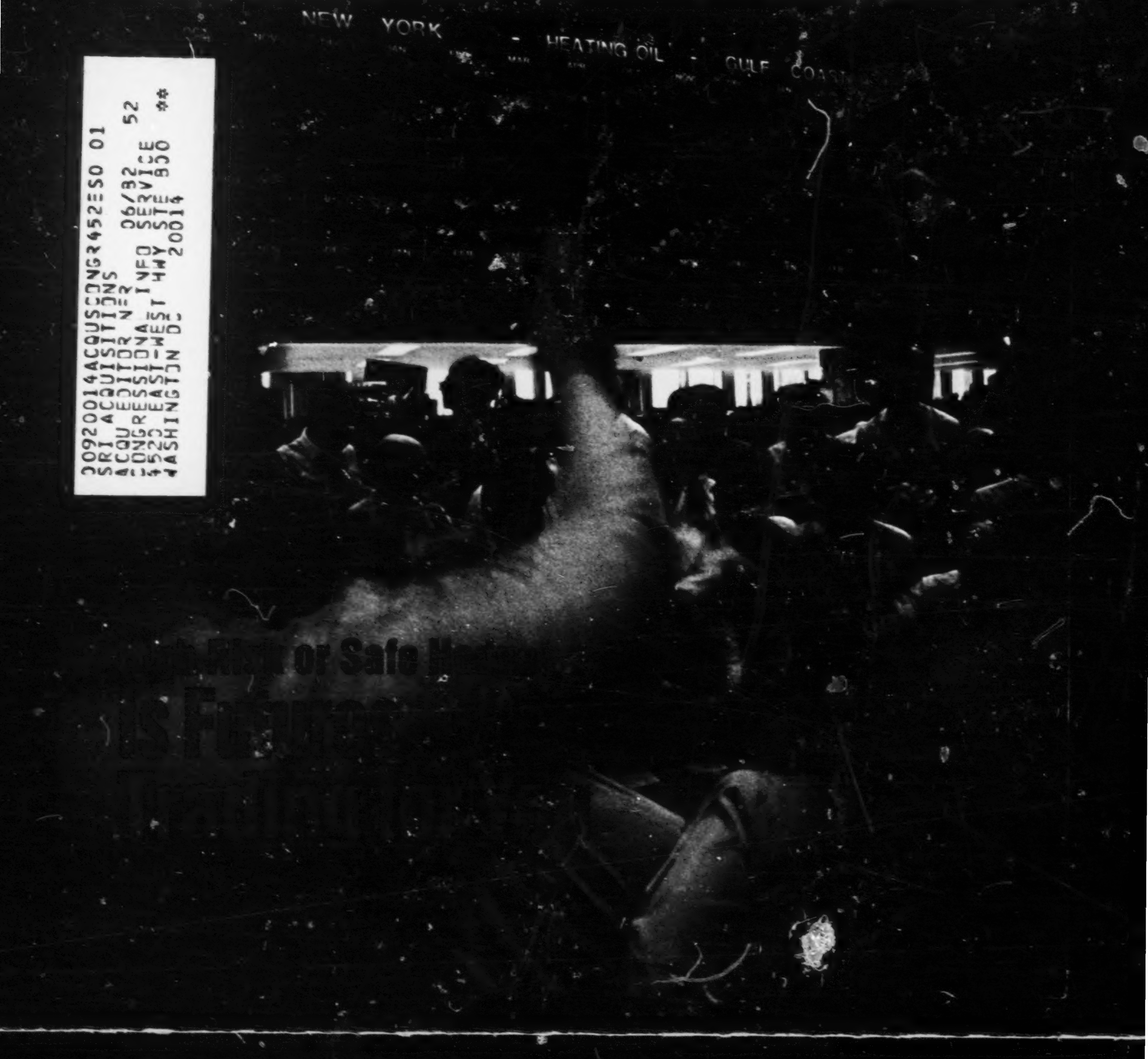

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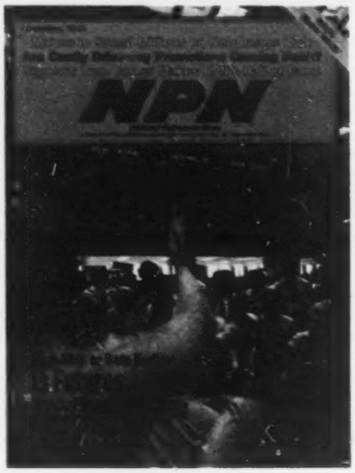

**Cover photo by George Palmisano on the floor of the New York Mercantile Exchange.**

### On the Cover

Oil decontrol, import uncertainties, the crude oil and product glut—all have led to volatile price swings both up and down in recent times. Some of the biggest swings were unpredictable and many marketing programs were thrown into disarray. In the opinion of some, the petroleum product futures market is the lever necessary in today's climate to hedge future risk and offset the arbitrary forces often shaping new conditions. Others look at the growing futures action as little more than high hucksterism. Page 56.

### Unwelcome Comeback?

Called a necessity by some and 'just another way to lose money' by others, island merchandising promotions are trying to return in today's hypercompetitive market. The question is: What lures today's price-conscious consumer in the era of $1-plus motor fuel postings, and how can low-margin conditions support these new give-away programs. Page 60.

### New Station Images

By the time the reins of government controls were lifted last January, there were those who swore the major brands were on the way out. Seeming neglect and indifference by major companies for their retail marketing programs bolstered this notion. Well, it ain't so any longer. Page 27.

### Fame and Fortune

Tom Turner has built Sigmor Corp. from a $350 lease agreement on a service station to a $1.8-billion (sales) diversified gasoline marketing empire. He takes his place next to other industry greats in NPN's Hall of Fame. Page 64.

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# Trends

## U.S. Fast Restoring Ability to Withstand Oil Import Cutoff

**Oil marketers may greet the news with mixed emotions but the combination of consumer conservation and federal decontrol of crude oil prices is moving the country toward less dependence on foreign oil much faster than thought possible by most experts as recently as 1979.**

A report issued recently by American Petroleum Institute concerning the nation's progress toward energy self-sufficiency contains both good and bad news for marketers.

The good news is the fact that oil imports continue to drop sharply while domestic exploration and production is on the rise. The nation now imports about one-third of its oil supply requirements as compared to almost one-half in the late 1970s. The steady drop in domestic oil and gas production and reserves of the 1970s, meanwhile, has been substantially slowed.

But the nation would still suffer a staggering blow with any sudden, large disruption in foreign oil supplies. Although imports dropped 19% in 1980 and another 20% the first half of this year, it is still importing 5.9-million b/d.

The bad news for oil marketers is that declining import requirements result, in essence, from falling demand for gasoline and heating oil. And, the outlook is for a continued decline in consumption.

Americans drove their cars only 1% less miles in 1980 than in 1979, yet they consumed 6.5% less gasoline. They added 3-million new private and public housing units, yet used 3% less energy to heat their homes. The trends toward long-mileage cars and better insulated homes and buildings will continue to cut into consumption, says the API report.

The long-mileage cars are really beginning to have an impact. In 1974, average fuel efficiency for new passenger vehicles was 14.2 miles per gal. This increased to 23.4 mpg in 1980. Current government standards require the fuel economy of new automobiles sold in 1985 to average 27.5 mpg, but automotive industry forecasts now suggest that new cars in 1985 may average 30 mpg.

Equally dramatic conservation efficiencies are having an impact on residential and commercial space heating.

From 1965 to 1972, energy required by these two sectors increased an average of more than 5.4% a year. There was a brief reduction following the oil embargo in the early 1970s but use then began to rise again in 1976, 1977, and 1978 before a 3% reduction in 1980.

In 1979, 13% of new homeowners added insulation and builders spent some $714 per new house on insulation (compared with $147 in 1972). Architects say that new designs in buildings now are at least 20% more energy efficient than in pre-embargo days, and that 40% to 50% improvements soon will be routine.

American industry—including agriculture, construction, mining and manufacturing—reduced its total energy use in 1980 by 4% from 1979, according to the API report.

The report adds that the nation appears to be "firmly established on the path toward increased energy conservation in the 1980s." Estimates of future U.S. energy consumption have been falling continuously since the oil embargo.

"Forecasts of 1980 energy consumption made in the early 1970s have turned out to be 29% or more above actual 1980 energy use," the report says. "Analysts who projected in the 1970s that Americans would use as much as 55-million bbl. of oil-equivalent daily in 1990 have now scaled their estimates down to as little as 40.5-million bbl. a day."

Normal growth rates, however, will keep pushing up total energy demand, it appears. The Energy Dept. projects that the nation will need the equivalent of 41.1-million bbl. of oil daily in 1990 compared with the actual use of the equivalent of 35.9-million bbl. a day in 1980.

One of the more encouraging things about API's report is its finding that accelerated drilling for oil and natural gas has helped slow the rate of decline in proved U.S. reserves.

During most of the 1970s, the U.S. produced and delivered more oil and gas than it replaced with new discoveries. From 1971 to 1978, the nation used about twice as much oil and natural gas as the domestic industry found.

But in 1979, additions to U.S. reserves equaled almost three-fourths of domestic production.

The U.S. Geological Survey and others estimate that the U.S. still could produce more oil and gas in the future than it has produced since the petroleum industry began in 1859. That means potential future production of 137-billion bbl. of crude oil, 27-billion bbl. of natural gas liquids, and 950-trillion cu. ft. of natural gas. **—Marvin Reid**

# Marketplace at a Glance

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| AUGUST | Gasoline (all types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| U.S. City Avg. | $1.348 | $1.310 | $1.376 | $1.444 |
| Regions: | | | | |
| Northeast | 1.378 | 1.344 | 1.399 | 1.439 |
| North Central | 1.327 | 1.293 | 1.359 | 1.421 |
| South | 1.327 | 1.286 | 1.351 | 1.397 |
| West | 1.391 | 1.347 | 1.428 | 1.470 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 10/2/81 | 10/3/80 |
|---|---|---|
| **Gasoline (total)** | 239,509 | 252,928 |
| **Gasoline (unleaded*)** | 93,048 | 87,987 |
| **Kerosine **** | 50,019 | 49,750 |
| **Distillates** | 209,978 | 232,079 |
| **Residual** | 74,083 | 91,265 |

**Included in finished gasoline total;*
***Includes jet fuel.*
*Source: American Petroleum Institute.*

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December, 1981

## Mobil-Marathon: How Many More Sitting Ducks?

## 'Sweetheart Deal' Colors Texaco Card Fee Fight

## Why One Marketer Seeks Varied Retail Tie-Ins

# NPN

## National Petroleum News

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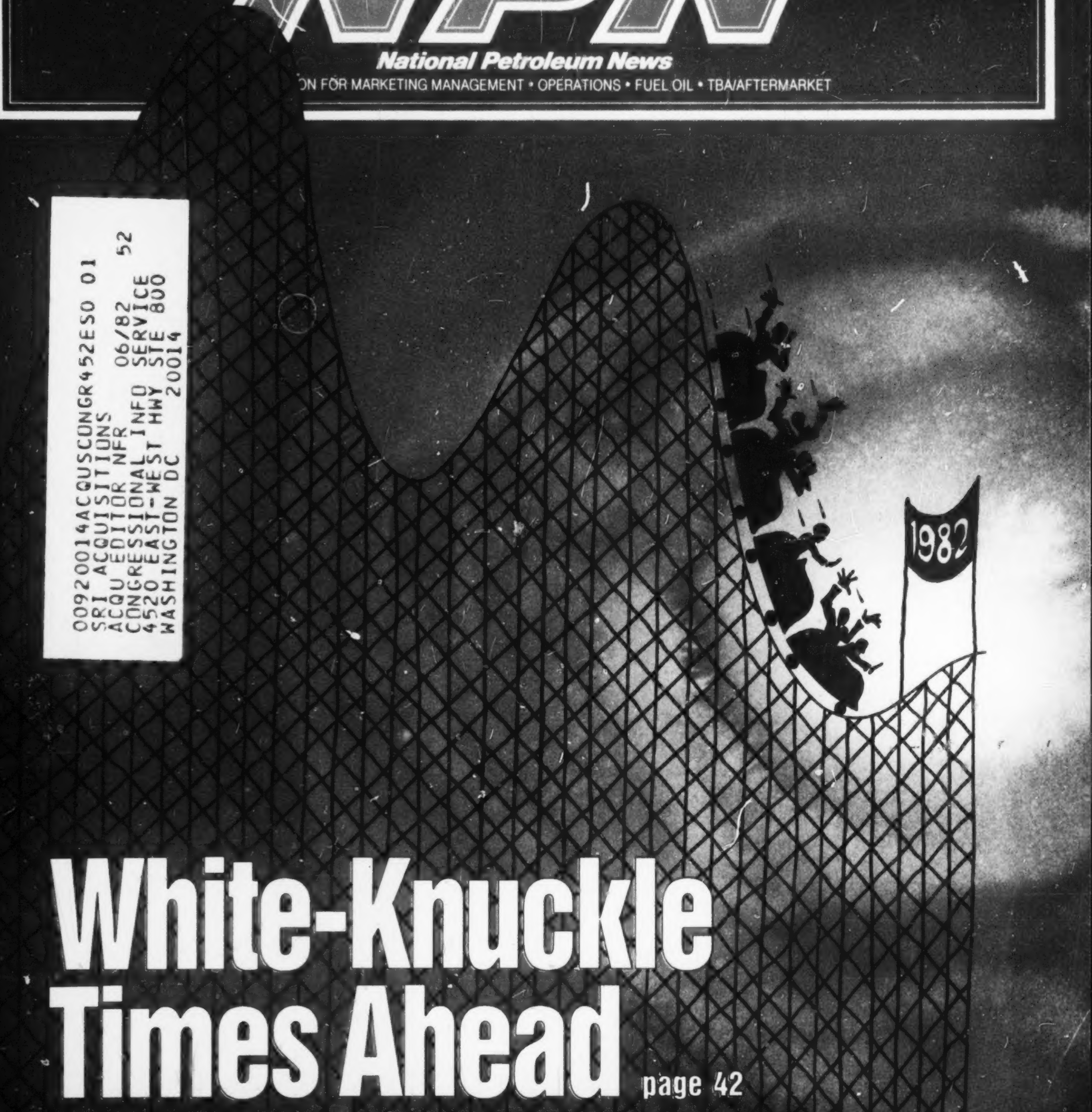

# White-Knuckle Times Ahead

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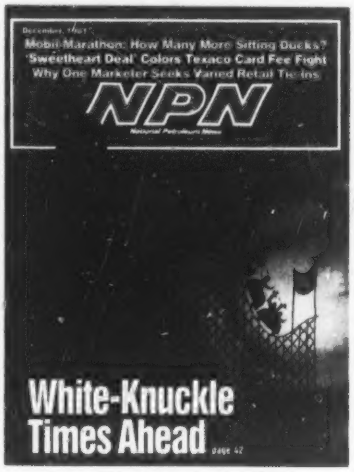
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**Cover Illustration by the Art Foundry**

### On the Cover

In the year ahead, oil marketers face some of the most sweeping changes ever in their 'normal business practices.' Shifts to varied terminal and rack pricing policies, credit card surcharges, cash discounts, rebates and competitive price allowances—even in good times, any one of these changes would be the basis for hot controversy. Collectively, however, and combined with a probable continuation of weak prices and margins, 1982 could have marketers thinking they're on a runaway roller coaster before the year is out. Page 42.

### Sitting Ducks?

Mobil's bid to take over Marathon Oil last month was a stunner. But more, it raises the question of whether other 'second tier' oil companies are equally as vulnerable. The Reagan administration, with its hands-off business policies, is not expected to provide much of a safety net for companies of Marathon's ilk. Trust busters, today, are out of work. Page 29.

### Leave Home Without It?

Many believe that Texaco, with its headlong and solitary thrust into credit card 'surcharges,' is only doing what decontrol prophets said was inevitable for all company marketing divisions eventually. But Texaco is the first company to try it. Despite an appealing price package available to the company's supply customers, which could take some of the sting out of the 3% credit card fee, jobbers and dealers are making a federal case of the situation—before other companies introduce fees and take the wind out of their 'competitive disadvantage' argument. Page 30.

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# Trends

## Time for Change in 'Art of Saying Nothing' about Marketing

**An acerbic report by a West Coast entrepreneur may trigger some changes in oil company annual reports down the road; especially as to what they say, or do not say, about gasoline marketing for the benefit of their stockholders, financial analysts and the general public. It will be an interesting situation to keep an eye on.**

The entrepreneur is John Roscoe, who's best known in the oil marketing field as the author of the "Dollars Per Day Survey" of the convenience store industry and the growth relationships of gasoline and groceries. Earlier this year, he decided he wanted to know more about the thinking and comments of oil company management on gasoline marketing. He compiled a list of 25 companies that account for 78% of the nation's gasoline production.

Reasoning that their annual reports should be a substantial source of information, Roscoe reviewed those of the 25 companies, then wrote each a letter requesting more. Eleven responded with supplemental data; the others turned him down for various reasons.

Out of it all, however, Roscoe came to conclusions like these:

- If annual reports are indicative of management concepts, oil companies obviously aren't too interested in gasoline marketing. For example, Roscoe's tabulation shows that the annual reports range in size from as few as 32 pages to as many as 92. The average was 57, in 1980. Of the 1,425 pages devoted to stockholder information, only 31 involved gasoline marketing—an average of 1-¼ pages per company. That, he suggests, implies benign neglect.
- Of the chief executives, none had an oil marketing background; all were engineers, legal, or financial men. This suggested to Roscoe that marketing just naturally gets short shrift because it is beyond the ken of the key executives.
- Upstream profits traditionally have been larger than those of the downstream network; hence this may be the reason why annual reports concentrate more on the upstream aspects than refining/marketing.

Roscoe sums up his feelings this way:

"The annual reports are impressive . . . full of nice photographs, and well written. It's only after you've read a number of them that the genre begins to appear ridiculous. It's even possible that all of these reports were written by the same staff.

"This would explain why offshore oil rigs, petrochemical plants, refineries, and pipes in general abound through these reports. They praise the present administration and decontrol, and make a plug for energy conservation. They are against the windfall profits tax but for more federal lands being leased for energy exploration and production. Above all, they emphasize that they are good corporate citizens. They want to solve the energy crisis and contribute to the good causes throughout America. But marketing gets lost in the parade.

"The major marketing statement in most reports is that stations will be closed to attain greater efficiency. Other changes include adding a high octane unleaded gasoline, or a change in pump design. Other than that, the reports have almost nothing [to say] about oil marketing."

Roscoe's son, Ned, a next-June graduate of University of Chicago in economics and philosphy, helped in the preparation of the study, which is entitled, "What Do the 25 Largest Oil Companies Have to Say About Gasoline Marketing in 1981?" In a discussion of marketing generally, the younger Roscoe makes this point:

"Profitable gasoline marketing of the future will . . . require a new management style. Today, many consumers perceive service station employees as people who couldn't get jobs anywhere else. A new approach to gasoline marketing might include that the employees have clean hands and cheerful personalities . . . If a person who pumps gasoline and rings up the sale doesn't have a good relationship with the company, the entire marketing process is undermined."

The Roscoe study nit-picks on deficiencies and achievements alike and raises some interesting and controversial questions. It's well worth reading; and it may lead to a change in the contents of future annual reports because gasoline marketing, as a contributor to oil company bottomline profit dollars, will have to carry its weight as never before. Stockholders and outside analysts may well feel they're entitled to more pertinent information on how marketing divisions, specifically, are faring.

**—J. Richard Shaner**

# Marketplace at a Glance

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| SEPTEMBER | Gasoline (all types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| U.S. City Avg. | $1.387 | $1.305 | $1.376 | $1.458 |
| Regions: | | | | |
| Northeast | 1.415 | 1.339 | 1.396 | 1.453 |
| North Central | 1.369 | 1.300 | 1.363 | 1.424 |
| South | 1.361 | 1.276 | 1.346 | NA |
| West | 1.432 | 1.339 | 1.427 | 1.473 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 10/23/81 | 10/28/80 |
|---|---|---|
| Gasoline (total) | 237,441 | 251,213 |
| Gasoline (unleaded*) | 92,599 | 89,453 |
| Kerosine ** | 48,085 | 51,098 |
| Distillates | 204,888 | 231,976 |
| Residual | 78,401 | 90,100 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

LOOKAHEAD

# White-Knuckle Times Ahead

By Marvin Reid
and J. Richard Shaner

The oil marketing industry seems to be headed toward sweeping changes in its traditional petroleum product pricing and credit policies in 1982. These changes, combined with what promises to be another very tough year on retail prices and margins, may have marketers thinking they are on a runaway roller coaster before the year is out.

Some trends which seem to be taking shape include:

- **Terminal pricing.** Almost all majors, including the "Big Four," are beginning to adopt some variations on zone-type terminal pricing. The traditional dealer tankwagon or destination form of pricing product to distributors may be on its way out.
- **Cash discounts.** This is another tradition considered a "normal business practice" by jobbers that began eroding late this year. If market conditions permit, credit policies on purchases of product at wholesale are likely to become much stricter.
- **Credit cards.** Texaco's bold move to put a 3% surcharge on its credit cards won't be the last such attempt, some marketers predict. Oil companies, generally, have long complained that their free consumer credit cards lose money on petroleum product purchases. Similar to rack or terminal pricing plans, various moves to charge for the card services may be attempted before one catches on.
- **Rebates.** Although still opposed by many jobbers, various oil companies apparently find these a useful tool in meeting competitive conditions at wholesale and retail. They are likely to keep the programs in effect so long as general market conditions remain weak.
- **Weak margins.** Some forecasters see another 2% to 4% drop in gasoline demand in 1982, approaching 1981's decline. Several leading independent marketers see the possibility for more street turmoil next year than existed in '81.

## Pain for the Jobber

Even in good years, any single one of the developments being forecast would cause hot controversy, especially those involving changes in basic pricing policies, credit terms, or credit card surcharges.

Collectively, and combined with a probable continuation of weak prices and margins, 1982 could become the year of big fusses.

Some dealers already are turning to the courts in efforts to stop Texaco's attempt to charge for its credit card [see page 30]. The National Oil Jobbers Council is threatening to seek government aid to stop major oil company price rebate programs. Around the country, meanwhile, jobbers complain that they don't receive as favorable a deal on the rebate programs as company-supplied dealers do.

There is a feeling in some quarters, though, that all of this could be a rather calm prelude to a much bigger storm already brewing.

"We see the markets continuing pretty much as they are now," says a top independent. "We think any jobber who has operating costs at his retail outlets of over 5¢ a gal. could be in trouble in 1982. We think there will be a bigger swing in market share next year than we saw this year, with the low-overhead marketer gaining at the expense of others. But we think you'll also see some 100,000-gal. gassers go out. Inflation, labor, and other general operating costs are eating some folks alive."

Marketers in various parts of the country already note an increase in the number of retail outlets being closed, and reports of sellouts or even bankruptcies at the wholesale level are increasing.

At the same time, however, a regional

marketer says he sees more new retail units going in than at anytime in the recent past. Almost all are "fuel stops," convenience-store units and the like.

"Lots of marketers lost 20% to 30% of their business this year," he believes. "They are getting pressure from their suppliers and some are trying to recover with modern facilities for today's market. You put these new entries in with those that have kept up with the market all along and those with outdated facilities will really have problems in the months ahead."

Three of the trends which appear to be taking shape—zone-type terminal pricing, stricter credit terms, and credit card surcharges—could be very painful for the typical jobber in good times. But right now, many claim they are battered and bleeding from the soft markets and thin margins of 1981. Some are likely to see such administrative moves as further attempts to cut into their margins.

Indeed, it does appear that oil companies are moving away gradually from various policies of the past that benefited jobbers specifically.

Company executives, however, were saying well before federal price and allocation controls were removed from gasoline that such changes are inevitable. They contend that refiner profit margins are too thin now to permit certain traditional practices of the past.

### Is DTW System Dying?

One of the most hallowed traditional policies of the past has been the dealer tankwagon (DTW) system of pricing gasoline. Various jobber benefits, which NOJC now refers to as "normal business practices," came into being more or less as part of the DTW system. Now the entire package is under assault.

Many company people say the old DTW system has become antiquated and therefore must go.

Under the DTW method, a major normally established a single statewide dealer price for gasoline. This price then was discounted on jobber sales to provide the jobber his margin. Theoretically, the companies equalized freight rates to jobbers and dealers over an entire state, with those located at distant points from terminals paying the same price for product as those near the terminals.

In the past, jobbers and dealers also received various benefits as part of the basic DTW price. Theoretically, again, such items as brand identification, company services, liberal credit terms, and the free use of company credit cards were buried somewhere in the DTW price structure.

Many companies tossed in additional benefits over the years, such as "freight" or "hauling" allowances for jobbers.

The oil companies now seem to be moving toward individual terminal pricing of products on a zone basis. Some are beginning to tinker with the hauling allowances

as they do so. And, in the meantime, credit terms are getting tighter and free credit cards soon may be gone.

Most oil companies appear to be moving away from uniform pricing systems that cover a wide expanse of geography, such as the DTW method, but it isn't all that easy to suddenly switch to something like terminal pricing.

"Those who are trying terminal pricing while keeping their DTW systems have some real problems," says an executive of a company that dropped the DTW method three years ago.

Nevertheless, most of the larger majors recently had terminal pricing tests under way and this trend is expected to spread.

The most popular terminal pricing concept at present seems to be one involving small-zone pricing around a terminal. As hauling distances increase, so do prices to jobbers and dealers if a company pays for the hauling.

Chevron USA, for one, is testing a new system in the Southeast that it calls "fan-out pricing." Its product prices are now set on a terminal-by-terminal basis in Florida, Georgia, South Carolina, Alabama, Mississippi, Tennessee, and Kentucky.

Jobbers who buy product from a particular terminal and haul their own product pay a flat terminal price under the Chevron system. They also continue to receive a hauling allowance. If Chevron delivers product to distributors, it adds a freight fee to the terminal price, with this fee varying in relation to the marketer's distance from the terminal.

There have been some Chevron jobber complaints that hauling allowances were reduced under the new system but Chevron reportedly is examining these situations on a marketer-by-marketer basis.

Gulf Oil also has started a zone-pricing system at its terminals in Alabama, Mississippi, and Florida. Under its concept, too, prices vary depending on a jobber's distance from a terminal. Gulf appears to be expanding its program rapidly to cover all of its marketing territory.

Conoco, long an advocate of rack pricing, is another which recently started a terminal pricing program. Its plan reduces the destination price by the amount equal to the crosstown freight for a particular terminal. The Conoco plan, in effect, wipes out the nearest freight for a terminal, says Eldon Saul, coordinator of jobber and dealer relations. He says the plan has met with general approval. "There were some small inequities and we are looking at these," says Saul.

So far, these companies and others with rack or terminal pricing plans have been careful to avoid the complete elimination of hauling allowances. One company, Exxon, which generally has not allowed jobbers to haul their own product in the Southeast, has come out with a new policy to let them do so, with an allowance, starting Jan. 1. Some jobber sources see the Exxon move as a step toward rack pricing.

## Credit Card Fuss

Jobbers apparently have resigned themselves to tighter credit policies as more and more companies move to stricter terms. But the big credit card fight touched off by Texaco recently was still raging as jobbers under other brands waited apprehensively for some announcement from their companies.

Dealer groups and some jobbers have attempted to create as great a furor as possible over Texaco's plans. One goal, apparently, has been to get the company to back off.

There are jobbers, however, who believe Texaco took the right step in saying it would begin charging 3% for the use of its credit card, effective Nov. 1. Oil company executives generally say this is something that has to come, too, although most were willing through October to let Texaco take all the flak.

"I think Texaco should be praised," says independent Truman Arnold of Texarkana, Tex., who flies the Texaco and Conoco brands as well as his private label, Road Runner. "This is necessary to get things cleaned up and straightened out. This could be a first step toward component pricing, which I strongly advocate. The credit cards need to stand on their own. I hope Texaco sticks with its plan."

Many jobbers began to push their companies for the right to buy both branded and unbranded product as market conditions became extremely competitive this year. The credit card issue and controversy over various rebate programs simply increased their interest. More companies may begin offering such dual programs in 1982.

Conoco is one company that has told its branded jobbers it is considering such a program. One industry newsletter, *U.S. Oil Week*, has reported that Conoco will unveil a plan in January that allows its branded jobbers to buy cheaper unbranded

### U.S. Petroleum Supply and Demand Forecast—1982

(000 b/d, except closing stocks)

| | 1st Q | 2nd Q | 3rd Q | 4th Q | YEAR |
|---|---|---|---|---|---|
| **Domestic Product Demand:** | | | | | |
| Motor Gasoline | 6,233 | 6,526 | 6,601 | 6,476 | 6,460 |
| Aviation Fuels | 968 | 955 | 998 | 998 | 980 |
| Middle Distillates | 3,665 | 2,625 | 2,513 | 3,309 | 3,027 |
| Residual Fuel Oil | 2,375 | 1,823 | 1,906 | 2,097 | 2,050 |
| Liquified Gases | 1,693 | 1,298 | 1,287 | 1,644 | 1,480 |
| Other Products | 1,745 | 2,013 | 2,091 | 1,937 | 1,947 |
| Total | 16,679 | 15,240 | 15,396 | 16,461 | 15,944 |
| **Exports:** | 503 | 487 | 476 | 485 | 488 |
| **Total Demand:** | 17,182 | 15,727 | 15,872 | 16,946 | 16,432 |
| **Total Supply** | | | | | |
| **Domestic Production:** | | | | | |
| Crude Oil | 8,603 | 8,617 | 8,596 | 8,618 | 8,610 |
| Natural Gas Liquids | 1,578 | 1,558 | 1,524 | 1,553 | 1,553 |
| Total | 10,181 | 10,175 | 10,120 | 10,171 | 10,163 |
| **Required Imports:** | | | | | |
| Crude Oil | 4,277 | 4,084 | 4,193 | 4,399 | 4,238 |
| Motor Gasoline | 141 | 149 | 149 | 139 | 147 |
| Aviation Fuels | 40 | 42 | 47 | 46 | 44 |
| Middle Distillates | 226 | 152 | 144 | 185 | 174 |
| Residual Fuel Oil | 815 | 545 | 639 | 757 | 688 |
| Liquified Gases | 237 | 161 | 171 | 218 | 196 |
| Other Products | 105 | 111 | 111 | 108 | 109 |
| Total | 5,841 | 5,244 | 5,454 | 5,852 | 5,596 |
| **Other Supply:** | 727 | 603 | 717 | 675 | 684 |
| **Total Supply:** | 16,749 | 16,022 | 16,291 | 16,698 | 16,443 |
| **Closing Stocks** (000,000 bbl.): | | | | | |
| Motor Gasoline | 257.4 | 238.9 | 231.5 | 233.4 | 233.4 |
| Aviation Fuels | 56.3 | 59.8 | 61.5 | 63.8 | 63.8 |
| Middle Distillates | 171.5 | 191.0 | 227.2 | 214.7 | 214.7 |
| Residual Fuel Oil | 75.2 | 79.4 | 92.9 | 99.8 | 99.8 |
| Liquified Gases | 100.7 | 113.0 | 123.8 | 108.5 | 108.5 |
| Other Products | 72.7 | 77.5 | 74.9 | 79.1 | 79.1 |
| Total Products | 733.8 | 759.6 | 811.8 | 799.3 | 799.3 |
| Unfinished Oils | 123.7 | 125.2 | 124.1 | 123.4 | 123.4 |
| Natural Gas Liquids | 15.2 | 15.8 | 16.4 | 16.2 | 16.2 |
| Crude Oil | 370.9 | 369.9 | 365.6 | 360.7 | 360.7 |
| **Total All Oils:** | 1,243.6 | 1,288.7 | 1,317.9 | 1,299.6 | 1,299.6 |
| **Crude Runs to Stills:** | 12,736 | 12,506 | 12,722 | 12,883 | 12,714 |

Source: Independent Petroleum Assn. of America Supply and Demand Committee, October, 1981.

product. Conoco's Saul, however, said later that only a recommendation had been presented to company management, with no fixed date if it is approved.

"At this stage, we are interested and our jobbers are interested in such a plan," Saul added.

Most jobbers at a Conoco distributor meeting earlier had pushed for such a plan, as well as component-type pricing. Conoco promised to take a look at the component pricing concept, too, but told the jobbers such a system could be an administrative nightmare.

### Rebate Squabble

Even rebate pricing programs, which many oil companies put into effect in 1981 to help jobbers and dealers meet competitive price conditions, are under fire from the jobbers. But the companies generally consider these programs to have some merit and 1982 probably will be another year of rebates.

William Quortrup, NOJC's president, wrote to 13 oil companies in October to complain that their rebate pricing programs were "counterproductive" and jeopardized the "economic viability" of many jobbers.

"The rebate programs tend to discriminate between marketers," Quortrup wrote. "Some jobbers, because they have lower contract volumes, became eligible for the rebate much sooner and thus have a competitive advantage over other jobbers. In addition, most companies are giving unlimited rebates to dealers which in some cases have allowed dealers to purchase product at or below many jobbers' cost."

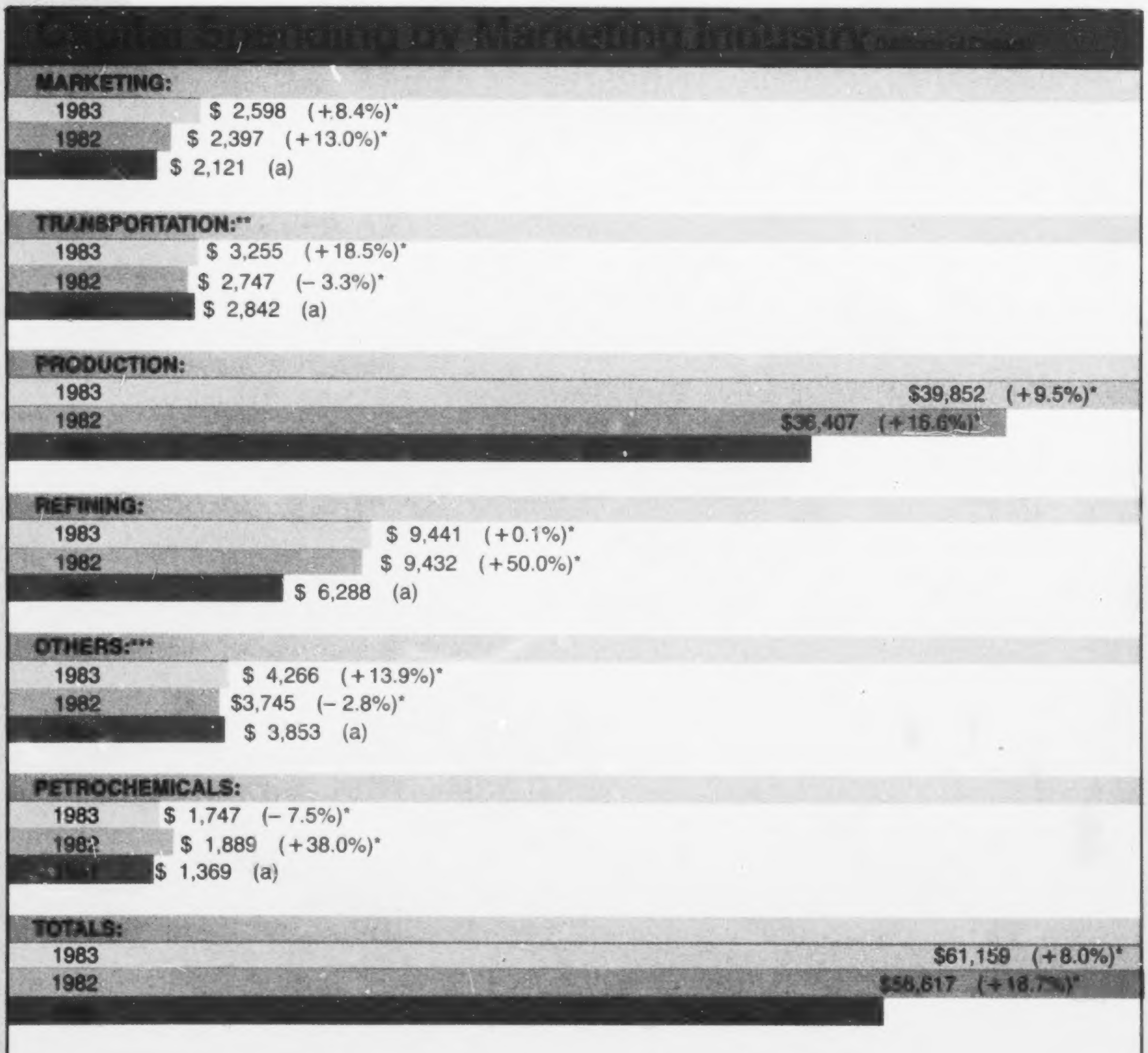
The dealer advantage under some programs in late October, in particular, had a number of jobbers upset. Large majors such as Texaco and Shell, in some instances, have had better plans for their dealers than jobbers recently.

Quortrup warned the majors that NOJC might seek "governmental redress" unless the companies discontinued their programs.

Some individual jobbers, on the other hand, now praise some of the rebate programs. A Texaco jobber, for example, said in late October that he liked that company's method. "With their rebate program, they have a hell of a good price right now," said the jobber. "I think their net after-rebate price reflects a reduction to offset the planned charge for credit cards."

NOJC's Quortrup, however, maintains that the rebate programs are little more than old-fashioned price protection in disguise and he wants companies to cut out such indirect price cutting. He believes they simply should reduce their prices to "realistic" levels to begin with.

Supplier-jobber arguments over branded and unbranded product prices are likely to mount in 1982 as new pricing plans, rebate programs, and other items are debated. Some jobbers would prefer a



*Figures in parentheses indicate percentage of change from previous year's total. **Includes only oil pipelines, not gas.
***Includes coal mining. (a) Comparisons with prior years cannot be made inasmuch as the projection bases from 1981 on were changed materially and cannot be related.

Source: McGraw-Hill Economics Department, Nov. 1981.

rack pricing system, with product priced on a component basis. They want the costs of such things as the brand, credit card, company services, etc., spelled out with the jobber able to pick and choose what he wants to pay for.

One large jobber, for example, has a buying formula under which he considers that a major company supply contract, with the brand and credit card, is worth 0.75¢ to 1¢ gal. over unbranded rack prices. He breaks this down to 0.3¢ for credit card costs and the remainder for other items.

His 0.3¢ for the credit cards may be close to what suppliers want. Texaco's 3% surcharge, for example, comes out to this when gasoline is priced at $1 gal. But most companies are very leery about a further breakout on a component basis.

This particular jobber is very large and buys product from some 13 branded and unbranded suppliers. He already uses his basic formula, advising his unbranded suppliers that he won't buy from them unless they are at least 1¢ gal. under his branded ones and the branded companies are told he can't afford to pull from them when their prices get more than 1¢ over unbranded rack prices.

"This is the only way we can afford to buy product in today's market," he said in early November. "We are competing with 5¢ to 6¢ rack-to-retail unbranded competition in the marketplace. We can't absorb wide differentials at the racks and make it with such competition."

Unless something happens to tighten supplies, weak retail prices and low margins are likely to drive more jobbers to such thinking. The net result could be more growth for unbranded sales while branded purchases continue their slide.

Almost everyone now sees 1982 being chock-full of controversy and major changes in marketing policies. Sudden upheavals in supply conditions could slow some of the trends but, barring such possibilities, many marketers are clasping the roller coaster white-knuckled until conditions settle down.

## 1982 Supply/Demand

**Independent Petroleum Assn. of America's (IPAA) Supply and Demand Committee issues a forecast every fall that has been more on target than other industry and economic prognosticators [see table on page 44].**

Here's the way IPAA sees 1982:

- **Economic activity** will exhibit a continued moderate growth in 1982, following an anticipated gain of approximately 2% this year.
- **Energy consumption** will show a modest gain after a 2.3% decline in 1981.
- **Oil demand** will decline about 140,000 b/d to an average 15.9-million b/d. This will be in the wake of an average 900,000 b/d decline in 1981—more than 1-million b/d over a two-year period.
- **Motor gasoline and residual fuel consumption** also will continue to recede, while middle distillates will reverse the downward trend of recent years and grow modestly.
- **Oil imports** will average 5.60-million b/d, down from an estimated 5.67-million b/d in 1981.
- **Refinery utilization** will remain low, with crude runs increasing less than 100,000 b/d from the 1982 level of 12.6-million b/d.
- **Crude oil production** will show a slight gain in 1982—a result of intensified drilling efforts.
- **Natural gas consumption** will increase slightly after a 1981 decline.

Getting down to specifics, the IPAA committee indicated it isn't the least bit concerned about supply in 1982. It said:

"Oil product supplies appear ample for 1982, despite the fact that refinery capacity is expected to be utilized at historically low levels.

"Stocks of both crude oil and products will continue to contribute to the supply picture in roughly the same degree that was evident during 1981."

The IPAA committee ignored the high cost of inventories, however, a factor that created severe financial strain for suppliers and marketers alike. Ballooning cost of carry was the prime reason that inventories of all sorts were pulled down in 1981 from the record-breaking levels that prevailed throughout most of 1980, to workable averages by November of this year. This was accomplished by a reduction of refinery utilization levels to the lowest point in years, and continuation of that reduction in a 68% to 71% of capacity range—20% to 25% below normal.

### Product Demand

Here again is what IPAA has to say:

"Following an estimated decline of over 900,000 b/d in 1981, domestic product demand is expected to show a moderate decrease of 140,000 b/d to an average of 15.9-million b/d in 1982. The continuation of factors which curbed demand in 1981 [such as fuel switching, improved fuel efficiency, and conservation efforts] will continue to dampen product demand next year.

"Motor gasoline consumption is forecast to fall 1.7% in 1982, or approximately 300,000 b/d in 1981 from the adjusted 1980 level of 6.86-million b/d. This decline in motor gasoline consumption results mainly from continuing improvements in vehicle efficiency which is increasing the miles per gallon. This more than offsets the increase in vehicle population and miles driven.

"Middle distillate demand is expected to increase 1.5% in 1982 to an average 3.03-million b/d, following an estimated decline of nearly 4.7% in 1981. The modest increase in 1982 is a result of increased diesel fuel demand continuing to be partially offset by reductions in the heating sector.

"Residual fuel-oil demand is expected to decline 4.7% to an average 3.05-million bbl. in 1982 following a decline of 15.6% in 1981. The decline in 1982 demand will continue to be seen in all markets due to the substitution of other fuels. Consumption of this product will have declined over 1-million b/d during the 1978-82 period.

"Aviation fuel consumption is expected to average 980,000 b/d in 1982, a decline of 2.0%. This follows a drop of 9.4% to a level of 1-million b/d in 1981. This lower demand assumes a continuation of the currently mandated reduction in airline schedules.

"Demand for liquefied petroleum gas is expected to remain flat in 1982, following an increase of 1.7% in 1981. Other products are expected to increase 2.3% in 1982 following a decline of 1.5% in 1981."

IPAA and John Lichtblau, head of Petroleum Industry Research Foundation and well known as an oil economist, see eye-to-eye on the nation's economic growth in 1982, with the New Yorker a bit more optimistic. He believes gross national product (GNP) may increase as much as 3.0% whereas IPAA had a ceiling of 2.2%.

Lichtblau does not share IPAA's pessimism about oil demand in 1982, however. Says he:

"Oil demand will increase modestly in 1982, particularly if the real price should decline somewhat. We project a possible growth of 1.0% to 1.5%, to 16.4-million-16.5-million b/d, reversing a three-year trend of declining demand.

"Assuming no change in domestic crude production in 1982, the demand increase will cause net imports for commercial requirements to rise about 500,000 b/d due to inventory adjustments."

### DOE and Fuel Oil

Department of Energy's Energy Information Administration also believes that the GNP will move up about 3% in 1982, that petroleum demand will drop about 4% in 1981 and rise slightly in 1982 as the GNP increases.

Of more immediate concern is the government agency's projections on home heating oil consumption this winter.

It believes demand for distillates (including some diesel fuel) will be about 3.25-million b/d in the last quarter of 1981, 3.56-million b/d in the first quarter of 1982, and 2.74-million b/d in the second quarter. This would contrast with consumption of 3.28-million b/d in the last quarter of 1980, and 3.47-million b/d and 2.43-million b/d respectively for the first two quarters of 1981.

## Capital Spending

**Oil's capital spending plans always are a good barometer of its designs on the future.**

McGraw-Hill's fall investment survey, released publicly only three weeks or so ago, was on the rosy side for 1982 and beyond [see table on page 45].

It projected petroleum capital spending of $47.7-billion in 1981; $56.6-billion in 1982, an increase of 18.7%; and $61.1-billion in 1983, a further increase of 8.0%.

The publishing firm's economics department issued a caveat in its 1982-83 forecast, however. It said that it had recently reviewed all its projections of recent years, compared them with actual results, then revised its historical bases to bring the projections in line with reality.

(This resulted in a diminution of all 1982 concepts and a reduction in the dollar and percentage totals in all functions of the petroleum industry. In addition, a spokesman noted, comparisons with data of the past are not possible because of this shift in the historical totals and relationships.)

### Oil Marketing

In the new projections for 1982 and 1983, oil marketing will not be doing badly in the capital spending pie though its total, $2.1-billion to $2.5-billion per year, is only a small part of the $48-billion to $61-billion oil companies will spend.

This forecast anticipates an expenditure of $2.1-billion on marketing facilities by the end of this year; $2.4-billion in 1982, an increase of 13.0%; and $2.5-billion in 1983, an increase of 8.4%.

On a three-year basis, then, this indicates that oil's marketing investments should top $7-billion. Although this may sound like an awful lot of money, it's just about the same level the industry has been maintaining since 1977-78, when inflation factors are considered.

Most of this money is going into service-station modernization and construction, primarily the former, plus toward the equipment involved; vapor recovery requirements, and other essential hardware.

It would appear, however, that these projections fall short of considering the burgeoning revolution in new equipment concepts, such as multi-product and overhead dispensers, computerization and microprocessors, and other hardware items that are available and were on display at the Petroleum Equipment Institute's trade show in October [see page 50].

McGraw-Hill says refining facilities will get capital programs exceeding $9.4-billion in 1982 and 1983, for a three-year total of $25-billion. This is the most that has been invested in refining in years. It is giving recognition to the need for more sophisticated equipment to meet the ever-spiraling demand for unleaded gasoline.

As is the tradition, exploration and production will get the lion's share of capital investments over the three years—a total of more than $100-billion. With total oil price deregulation in 1981, the returns on these investments are seen as the truly profitable activities the big companies can pursue. The incentives are in place.

## Washington Scene

**If it isn't a *fait accompli* by Dec. 1, as was a distinct possibility just a month ago, decontrol of natural gas could be one of 1981's cliff-hangers or a for-real occurrence in early 1982 [see page 34 for details].**

Since last September, decontrol has been on and off the front burner in the White House so often that most industry people refused to get excited about the recurrent rumors and corridor talk.

President Reagan is for it, and so is his cabinet council. At the time he won his AWACS battle in the Senate, Washington was filled with fresh rumors that a decontrol proposal would be sent to Congress before the year was out. This was a far cry from earlier convictions that Reagan necessarily would have to hold off until 1982.

On the contrary, said one savvy industry executive, "this is strictly a political issue, not an economic one. Reagan's committed to free enterprise and he wants it, just like he wanted gasoline decontrol. And when he senses that the time is ripe, watch him go. It'll cause an uproar in the House because of people like [John] Dingell [D-Mich.] but it will be hard to knock down."

Fuel-oil jobbers are all but cheering. For them, the end is in sight of the widely disparate prices and competitive factors resulting from federal controls, which have kept gas prices artificially low since the 1950s.

There should be some controversy over the dismantling of the Department of Energy. Reagan started it his first week in office when he appointed a little known dentist from the Carolinas to preside over its obliteration. DOE's budget already has been reduced sharply, people are being dropped from the payrolls by the thousands and offices are being closed or phased out.

In another year or two, all that will be left of DOE will be its synthetic fuels programs which may, or may not, be turned out to other government agencies.

The man who took over the enforcement division of DOE in October bravely said he is going to continue prosecution of price control violations. How long he or DOE lasts, however, is questionable.

There could be a ruckus in Congress over an emergency stand-by allocation plan for oil products, particularly gasoline. In October, General Accounting Office bitingly noted that the nation is "no better prepared to deal with significant disruptions than it was in the 1973 oil embargo" [see page 35].

## TBA Outlook

**Just as one man's problems often turn to good fortune for another, the demise of many automobile dealerships is enhancing the aftermarket prospects for service stations.**

Here too, the continuing decline in the service-station population is making things all the cozier for those who survive.

The widespread closing of car dealerships means there will be some 20,000 fewer service bays available in the immediate future, say TBA experts.

But with these changes come increasing problems for service-station TBA operations. Do-it-yourselfers are still geared up to change oil and do minor tinkering on their new cars. But the sophistication of the newer engines is driving more of them to service stations for repair work beyond their capabilities, especially the electronics.

At the International Oil Industry TBA Group meeting this fall, question was raised whether either the oil companies or the service stations are adequately preparing themselves for this development [see page 52].

The erosion of margins in the gasoline industry means that aftermarket services, in many cases, will have to be stepped up to enable retailers and jobbers to stay solvent. It would appear in 1982 that the opportunities are there for those who would take advantage of them.

## Lube Oils

**Up modestly from the depressed levels of 1980 but nonetheless well below the peak of 1979, motor-oil sales are expected to flatten out in 1982 and continue in that same vein through 1986.**

This is the projection of Charles H. Kline & Co., Fairfield, N.J., marketing consultants who began to track crank-case oil sales early last year.

Kline says U.S. consumers will purchase 615-million gal. of motor oil in 1981. The outlook for 1982 is a bit under that—perhaps 600-million gal. Over the next four years, consumption should average about 600-million gal. annually, according to Kline.

Peak year 1979 saw U.S. consumers buying 670-million gal. This climaxed a steady growth that began in 1974 at the 590-million-gal. level.

The Kline survey shows that the lube-oil market is moving strongly toward such merchandisers as discount stores, home and auto stores, department stores, and supermarkets. The trend to do-it-yourself handling is the biggest spur in this direction.

By contrast, service stations, repair garages, and car dealers are sharing less of the declining gallonage.

Kline says Quaker State still is the largest marketer of motor oils with Pennzoil a close second. "These two control nearly 25% of the gallonage," the survey says. Texaco, the leading brand sold through service stations, ranks third, followed by Ashland (Valvoline), Witco (Kendall and Amalie), Shell, and Exxon. All told these 14 suppliers represent 80% of the market.

Kline predicts that the dollar value of the lube-oil market will rise to $2.8-billion by 1985.

## Gas-Heat Conversions and Additions, 1980-81

| | 1980 (Add 000) Total Unit (a) Additions | Total Unit (b) Conversions | Total From Fuel Oil | % Converted From Fuel Oil | 1981 (Add 000) Total Unit (a) Additions | Total Unit (b) Conversions | % Change Total Additions '81 vs '80 (Col. 5 vs 1) | % Change Total Conversions '81 vs'80 (Col. 6 vs 2) |
|---|---|---|---|---|---|---|---|---|
| **United States** | 1,090.2 | 583.0 | 498.0 | 85.4% | 907.7 | 394.5 | −16.7% | −32.3% |
| New England | 72.9 | 63.5 | 62.8 | 98.9 | 20.6 | 16.9 | −71.7 | −73.4 |
| Mid-Atlantic | 238.2 | 212.2 | 199.0 | 93.8 | 165.0 | 138.7 | −30.7 | −34.6 |
| East North Central | 241.2 | 164.9 | 118.7 | 72.0 | 195.2 | 109.1 | −19.1 | −33.8 |
| West North Central | 63.3 | 28.4 | 16.8 | 59.2 | 37.6 | 12.0 | −40.6 | −57.7 |
| South Atlantic | 139.6 | 82.9 | 79.4 | 95.8 | 150.4 | 91.5 | +7.7 | +10.4 |
| East South Central | 22.5 | 4.4 | 2.4 | 54.5 | 23.7 | 4.1 | +5.3 | −6.8 |
| West South Central | 75.6 | 4.2 | 3.6 | 85.7 | 66.4 | 3.3 | −12.2 | −21.4 |
| Mountain | 71.3 | 2.6 | 1.6 | 61.5 | 75.3 | 2.3 | +5.6 | −11.5 |
| Pacific | 165.6 | 19.9 | 1.7 | 8.5 | 173.5 | 16.6 | +4.8 | −16.6 |

(a) Includes new construction; (b) includes conversions from fuel oil, electricity, coal, wood, etc.
Source: American Gas Assn. "Gas Househeating Survey: 1980," issued October, 1981.

# Gas Heat Converts: 1981's Dying Cult

**For fuel oil jobbers and dealers, the news that flowed from the American Gas Assn.'s (AGA) recent meeting in New York City ran both hot and cold.**

First, the bad news: The gas utilities are still bullying the heating oil industry in the matter of residential oil-to-gas conversions.

Now, the good news: The utilities aren't nearly as awesome as they used to be, and it appears that the pace of conversions, while still high, is nevertheless confronting its first decline in years.

Heating oil jobbers and financial markets interpret the 1981 slippage as proof positive that householders are reacting negatively to the perception that natural gas prices will rise rapidly in the wake of decontrol, which is a distinct 1982 possibility.

This, they say, would close or reduce the price gap between natural gas and heating oil for residential use, and make them competitive again.

Privately, fuel oil jobbers are rejoicing at the prospect of natural gas decontrol. Publicly, they are championing the proposal and putting increasing pressure on the Reagan administration to act on it as early as possible.

The erosion in oil-to-gas conversions is the first relief oil jobbers and retailers have had in the space-heating market in years. They have been fighting the utilities for a quarter of a century but it always has been a case of hundreds of independent jobbers versus a utility monopoly in most markets—much like a band of Lilliputians versus Jonathan Swift's Lemuel Gulliver.

### 32.3% Drop in 1981

AGA, in an abstract of its annual gas house-heating survey, says it expects its net residential additions (new construction and conversions from other fuels) to be down 32.3% in 1981—after years of steady growth. It also expects that conversions from fuel oil to gas will be down, too—16.7% below peak-year 1980 [see the table above].

Gas' biggest declines are coming in the New England and Mid-Atlantic areas, fuel oil's biggest marketplaces.

In New England, net residential additions are expected to be off 71.7% in 1981, and oil-to-gas conversions, 73.4%.

The Mid-Atlantic chart shows that net additions for gas could be down 30.7% and conversions, 34.6% lower in the year just coming to a close.

The West North Central region, traditionally gas country, also is experiencing a slump in net residential additions, off 40.6%, and in conversions, off 57.7%.

AGA indicated that the year 1980 may have been the peak in net residential additions and in total oil-to-gas conversions.

Gas utilities picked up almost 1.1-million new customers in 1980, of which 47% were new homes and 53% were conversions from other fuels—heating oil, propane, electricity, coal and wood.

Fuel oil was the biggest loser, to be sure, with 497,950 homes (85% of the total) switching to gas. Here again, the statistical breakdown leaves no doubt that New England, the Middle Atlantic states, the North Central States, and the South Atlantic were the areas of greatest turnovers.

Although AGA's background data do not cite reasons for the big jump in 1980 additions and conversions, many industry observers note that fuel oil prices climbed rapidly during the year and at a time when natural gas supplies seemed to be loosening up and holding promise of a rosy future.

The AGA report says the gas industry heated 44.6-million homes in 1980, of which more than 10.6-million were in the East North Central area—primarily, the Upper Midwest and Great Lakes states.

It also says the gas utilities gained ground in the new home market, from 34% in 1979 to 39% in 1980. Electricity and fuel oil netted the balance, with electric heat snaring the lion's share—about 50%.

### Electric Bills Way Up

Encouraging to heating oil marketers, too, are the big jumps and wide variances reported in electric utility rates around the country. In a recently released survey covering the 1980-81 heating season which compared residential electric bills, the National Assn. of Regulatory Utility Commissioners reported sharply increased electricity costs over the prior years and a wide disparity in rates.

A random sampling of 50 of the 198 service territories contained in the survey shows that residential electric bills jumped about 17.25% over the year before. This contrasts with an 11.3% increase in the Consumer Price Index during the same period. Using 500 kilowatt hours as a basis, electricity costs climbed from 5.4¢/kwh to 6.33¢/kwh during the year.

The report also showed a wide variance in rates depending on the service territory of the consumer. For example, in 12 service areas consumers are paying in excess of 10¢/kwh, while in 16 other areas, the cost is less than 4¢/kwh. Of the 25 major cities, residents of New York pay 11.67¢/kwh, while in St. Louis the cost is 4.36¢/kwh. Other high-average cities are Honolulu (10.06¢), San Diego (9.89¢) and Boston (9.45¢). Low rates were found in Atlanta (4.70¢), Oklahoma City (4.75¢) and Cincinnati (4.89¢).

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January, 1982

## Why 'Fuel Stores' Have the Indies Turned On

## Southland Unveils Expensive 'Tri-Combo'

## Big-Time Strategies Pay Off for Small Jobbe

# NPN

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### Can You Afford Not To?

# High Cost of Gearing Up

Big-Time Strategies Pay Off for Small Jobber
NPN
GASOLINE
High Cost
Gearing

**Cover illustration by Bradley H. Clark**

## On the Cover

Gasoline marketing has taken a quantum leap from the prosaic equipment designs of the past half century into a bold, new world of space-age electronics with uninhibited design and application. An evolution/revolution is under way in the petroleum equipment industry, and for no meager allowance. The futuristic concepts here today are bringing with them costly price tags for the marketer inclined to sophistication and efficiency. Page 40.

## Super Pumpers Soar

New high volume, self-service diesel and gasoline "fuel stops" are springing up all over the country, giving the conventional truckstop business a costly run for its money. Some call this the hottest trend since self-service convenience store pumpers were introduced. These so-called "super pumpers" boast throughput of 700,000 gal. a month with profits equally as impressive. But beware, these outlets are not foolproof and the cost of construction is staggering. Page 44.

## Big Changes Brewing

Two trends long feared by many oil marketers became reality when Amoco announced it would begin terminal pricing for jobbers in the Midwest and West and withdraw its brand from 11 states. Though the company indicated it would match the elimination of hauling allowances with lower product prices, distributors nevertheless find the development disquieting in the dollar-sign sense. Page 31.

## A Kingly Combination

Southland Corp., the kingpin of convenience stores, recently opened its first "tri-combo"—three separate company profit centers sharing a common site. A 7-Eleven outlet, a Chief Auto Parts store and the big volume Super 7 gasoline operation all share the same address. It is a project that has the competition buzzing. Page 47.

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# • TRENDS

## Gasohol No Longer the 'Mom and Apple Pie' Product It Was

**Fashioning a silk purse from a corn cob, marketers of all sizes from White Plains to Des Moines are repositioning their alcohol blended fuels to stress premium quality over the "Motherland" concept. A number of operators who formerly marketed "gasohol" as a supply extender and home-grown alternative to oil imports, apparently are succeeding by marketing the 90% gasoline/10% ethyl alcohol blend as a "super unleaded with ethanol."**

The new emphasis is on the high octane and performance qualities of alcohol blended fuels which, with a 90-octane rating, can be considered a premium octane cure for engine ping and run-on, say advocates. Such blended fuels, they say, should be regarded and promoted as a substitute for super unleaded grades of gasoline, which are priced anywhere from 4¢ to 20¢ gal. over unleaded regular.

Repositioning the alcohol blended fuel as a premium unleaded product has been a developing trend since the product glut reinvigorated marketplace competition and brought gasoline prices tumbling—leaving gasohol blends high priced and unattractive as an alternative in times of plentiful supplies. Where the 4¢ gal. federal sales tax exemption on gasohol may not have been enough to make the alcohol blend competitive with unleaded gasoline being sold on the same island, the product appeared doomed.

For example, gasohol sales had slumped to 8% or 9% of total motor fuel volumes at stations operated by District Petroleum, Sandusky, Ohio, before the company decided to rename the blended product rather than scrap it altogether. "I peeled the corn cobs off the pumps and put on new decals," says vice president Scott Stipp, and began promoting the product as a super unleaded with ethanol. The three-month-old change has netted a gain in sales share to 16%-17% of total volumes, says Stipp, who prices the alcohol blend 2¢ gal. above unleaded regular gasoline.

The economics of pitching gasohol as a premium unleaded motor fuel have been penciled out in state after state by Archer Daniels Midland (ADM). The biggest fuel-grade alcohol producer turned its own marketing thrust 180 degrees last year to recast fuel-alcohol blends as a premium-quality product.

In District Petroleum's home state of Ohio, for example, ADM claims that gasohol, when marketed as a super unleaded-type product, actually costs the marketer 4.3¢ gal. less than 90/91.5-octane super unleaded gasoline, while commanding super unleaded's higher retail price and heftier margins. The cost factors for a gallon of 90-octane super unleaded with ethanol break out this way, according to ADM: 95.40¢ for 90% of the average rack price of unleaded gasoline; 17.8¢ for 10% of the average ethanol cost; 6.8¢ state tax, and no federal tax. Total cost: $1.20 gal. This compares with an average wholesale price in Ohio of $1.243 for super unleaded gasoline (4¢ gal. federal tax included), says ADM.

A Michigan jobber, Gallup-Silkworth Co., Ann Arbor, which direct operates 29 self-serve convenience store units, replaced its gasohol with the super unleaded/ethanol approach, for a 10% across-the-board sales increase. Sales of the alcohol blend, according to owner Chuck Gallup, have been running as high as 25% at some locations, with the average station selling between 17% and 20% super unleaded with ethanol.

"Our available conventional super unleaded cost us 5¢ gal. over and above regular unleaded," ADM quotes Gallup as saying. "With this conventional super we would have to price it 6¢ to 7¢ over unleaded to turn a profit. Our customers weren't receptive to the higher cost, but the ethanol allowed us to offer the high octane performance fuel at a lower price while still making greater margins."

Other wholesalers and retail-chain operators report similar results after promoting the fuel-alcohol blend for its premium-grade qualities [see page 52].

In fact, re-educating the public on the benefits of gasohol may not be the toughest nut to crack in reviving sales of the product. J.D. Streett, a large wholesaler and retailer based in St. Louis which operates in six states, has switched the marketing thrust on fuel-alcohol blends. The super unleaded with ethanol approach is an "improvement over gasohol," says company president Newell Baker. "People try it, like it and come back for more."

A bigger problem lies in marketing the product at the wholesale level—"purely a matter of educating the dealer, not the consumer," says J.D. Streett's marketing VP Hugh Watson. "The consumer will buy. The dealer is sometimes reluctant to get away from what he has always had.

"If we can ever get the dealer educated to the advantages of both the octane benefit and, in some states, the price advantage, we will further our [sales] of ethanol-based product to our wholesale units."

**—Ron Landry**

# • MARKETPLACE AT A GLANCE

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| OCTOBER | Gasoline (all types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| **U.S. City Avg.** | $1.353 | $1.299 | $1.371 | $1.457 |
| **Regions:** | | | | |
| **Northeast** | 1.382 | 1.333 | 1.390 | 1.443 |
| **North Central** | 1.336 | 1.293 | 1.359 | 1.424 |
| **South** | 1.323 | 1.269 | 1.340 | NA |
| **West** | 1.404 | 1.335 | 1.426 | 1.473 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 11/27/81 | 11/28/80 |
|---|---|---|
| **Gasoline (total)** | 244,264 | 253,748 |
| **Gasoline (unleaded*)** | 96,048 | 92,909 |
| **Kerosine **** | 52,543 | 57,237 |
| **Distillates** | 196,201 | 217,609 |
| **Residual** | 81,329 | 91,373 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

# In Caracas, 13¢ Gal. Is No Mirage

**Pssst. Want some gasoline at 13¢ gal. for leaded regular? And 31¢ gal. for leaded premium? Including taxes. It's available for the asking. All you have to know is where to go.**

Here's the info. All you have to do is wheel the old buggy (or tanktruck) up to any pump in Caracas, Venezuela. That city, according to the Energy Information Administration (EIA) in Washington, had the cheapest gasoline in the world at the beginning of 1981.

Venezuela's gasoline was even lower in price than that of Saudi Arabia, which is the world's largest exporter of crude oil. In Ras Tamura, where the big seagoing tankers line up by the hundreds the year around, the pump price for regular was 23¢ gal., and two pennies more for premium at the beginning of the year.

The EIA report, issued recently, shows there were at least six other countries where regular-grade gasoline sold for less than $1 gal., including taxes. They were Burma, 42¢; Mexico, 45¢; Ecuador, 60¢ Peru, 69¢; Bolivia, 76¢; Colombia, 86¢; Indonesia, 91¢ and Canada, 98¢.

European prices were much higher. They ranged from $2.26 and $2.33 in Luxembourg and West Germany, respectively, to $3.25 in Portugal and $3.28 in Italy. Premium grades ran 5¢ to 10¢ more per gal. Parisians paid $2.82 and Londoners, $2.51. European taxes are much higher, however. For example, taxes total $1.54 for regular grade in Paris and $1.23 in London.

U.S. prices, in comparison, were $1.24 gal. for regular, and $1.34 for premium leaded. But taxes averaged out to only about 12¢ gal., the government report noted.

As might be expected, distillates for space heating varied all over the lot, too. They ran as high as $1.95 gal. in the Republic of South Africa to as little as 6¢ gal. in Saudi Arabia. Europeans paid around $1.30 gal., while U.S. consumers paid an average $1.05 last January. Canadians were much luckier, however, paying only 61¢ gal.

Resid varied extensively, too, from as little as a $1.68 bbl. in Venezuela to $55.52 bbl. in Paraguay. That would average out to 4¢ gal. in Caracas to $1.32 in Asunción.

The U.S. average for resid at the beginning of the year was $31.35 bbl. By way of comparison, Canada was $18.90 bbl. and Mexico, $2.45 bbl. Most of Europe ranged from $30 to $40 bbl., with the highest being Yugoslavia at $53 bbl.

(U.S. dollars per gal. for gasoline, dollars per bbl. for fuel oils)

| | January, 1981 | | | | July, 1980 | | | |
|---|---|---|---|---|---|---|---|---|
| | Gasoline | | Fuel Oil | | Gasoline | | Fuel Oil | |
| | Reg. | Prem. | Dist. | Resid. | Reg. | Prem. | Dist. | Resid. |
| **WESTERN HEMISPHERE** | | | | | | | | |
| Argentina | $2.15 | $2.63 | $32.87 | $25.45 | $1.57 | $1.89 | NR | $17.32 |
| Bolivia | .76 | .91 | 31.91 | 25.44 | .76 | .91 | 31.91 | 25.44 |
| Brazil | 2.52 | NR | NR | 24.73 | 3.23 | NR | NR | 16.86 |
| Canada | .98 | 1.06 | 25.42 | 18.90 | .81 | .89 | 21.95 | 14.22 |
| Chile | 1.74 | 2.00 | NR | 28.64 | 1.74 | 2.22 | NR | 35.92 |
| Colombia | .86 | 1.03 | NR | 36.18 | .72 | .89 | NR | NR |
| Dominican Republic | NR | 2.39 | 39.67 | 22.82 | NR | 2.39 | 39.67 | 22.82 |
| Ecuador | .60 | .80 | NR | 11.76 | .19 | .73 | NR | 3.56 |
| El Salvador | 2.49 | 2.56 | NR | NR | NR | NR | NR | NR |
| Jamaica | 2.12 | 2.17 | 53.26 | 38.39 | 2.12 | 2.17 | NR | 27.97 |
| Mexico | .45 | 1.13 | NR | 2.45 | .46 | .66 | NR | 2.42 |
| Panama Republic | 2.04 | 2.17 | NR | NR | 1.98 | 2.11 | NR | NR |
| Paraguay | 3.61 | 4.51 | 68.77 | 55.52 | 3.00 | 3.75 | 46.62 | NR |
| Peru | .69 | .84 | 15.73 | 10.41 | .75 | .90 | 16.90 | 11.36 |
| United States | 1.24 | 1.34 | 43.93 | 31.35 | 1.22 | 1.31 | 35.28 | 20.58 |
| Uruguay | 3.31 | 4.11 | NR | 32.93 | 3.18 | 3.97 | NR | 31.61 |
| Venezuela | .13 | .31 | 2.44 | 1.68 | .13 | .31 | 2.44 | 2.44 |
| **WESTERN EUROPE** | | | | | | | | |
| Austria | 2.46 | 2.65 | 48.62 | 35.78 | 2.58 | 2.79 | NR | 29.73 |
| Belgium | 2.91 | 3.00 | 53.84 | 43.28 | 3.17 | 3.24 | 55.62 | 34.05 |
| Denmark | 3.09 | 3.13 | 43.41 | NR | 3.30 | 3.34 | NR | NR |
| Finland | 3.03 | 3.15 | 53.58 | 34.78 | 3.01 | 3.13 | 49.80 | 31.33 |
| France | 2.82 | 2.99 | 32.12 | 35.29 | 2.97 | 3.17 | NR | NR |
| Germany, West | 2.33 | 2.43 | NR | 34.33 | 2.46 | 2.57 | NR | 32.00 |
| Greece | 2.58 | 2.91 | 54.23 | 29.16 | 2.85 | 3.21 | 59.79 | 32.16 |
| Ireland | 2.50 | 2.54 | 54.05 | 38.85 | 2.73 | 2.77 | 56.60 | 36.59 |
| Italy | 3.28 | 3.38 | 32.88 | 35.98 | 3.08 | 3.15 | 35.09 | 30.27 |
| Luxembourg | 2.26 | 2.34 | 54.78 | 44.30 | 2.48 | 2.54 | 55.55 | 30.76 |
| Netherlands | 2.65 | 2.71 | 47.95 | 35.00 | 2.89 | 2.96 | 52.07 | 30.33 |
| Norway | 2.93 | 2.99 | NR | NR | 2.87 | 2.93 | NR | NR |
| Portugal | 3.25 | 3.54 | 49.00 | 25.24 | 3.13 | 3.45 | NR | 22.91 |
| Spain | 2.76 | 3.11 | NR | 36.04 | 2.81 | 3.24 | NR | 27.82 |
| Sweden | 2.75 | 2.80 | 53.59 | 47.88 | 2.64 | 2.70 | 53.17 | 40.57 |
| Switzerland | 2.56 | 2.58 | 46.03 | 38.78 | 2.79 | 2.81 | 47.70 | 31.32 |
| Turkey | NR | NR | NR | NR | 2.09 | 2.28 | 42.80 | 37.71 |
| United Kingdom | 2.51 | 2.52 | 50.53 | 36.01 | 2.60 | 2.65 | 48.64 | 33.84 |
| Yugoslavia | 2.88 | 3.12 | 55.52 | 53.00 | 2.63 | 2.91 | 44.19 | 42.63 |
| **MIDDLE EAST** | | | | | | | | |
| Iran | 1.62 | 2.16 | 4.08 | NR | .54 | .68 | NR | NR |
| Israel | 2.92 | 3.07 | 49.10 | 31.75 | 2.49 | 2.64 | 39.91 | 26.93 |
| Lebanon | NR | NR | NR | NR | NR | 1.22 | NR | 19.74 |
| Saudi Arabia | .23 | .25 | NR | NR | .23 | .25 | NR | NR |
| **AFRICA** | | | | | | | | |
| Ethiopia | 1.38 | 1.65 | NR | NR | 1.38 | 1.65 | NR | NR |
| Ghana | 3.12 | 3.42 | 58.02 | 43.39 | 2.10 | 2.25 | NR | NR |
| Kenya | 2.34 | 2.66 | 41.92 | 33.64 | 2.45 | 2.78 | 47.02 | 35.21 |
| Morocco | 2.93 | 3.10 | NR | 29.30 | 3.45 | 3.65 | NR | 34.54 |
| South Africa, Republic of | 2.53 | 2.59 | 81.70 | 44.27 | 2.48 | 2.54 | 79.98 | 43.34 |
| Tunisia | 2.07 | 2.20 | 14.28 | 12.24 | NR | NR | NR | NR |
| **ASIA-PACIFIC** | | | | | | | | |
| Australia | 1.57 | 1.87 | 51.50 | NR | 1.51 | 1.63 | NR | NR |
| Burma | .42 | NR | NR | NR | .45 | NR | NR | NR |
| India | NR | NR | NR | NR | 2.49 | 2.57 | 44.36 | NR |
| Indonesia | .91 | 1.33 | 11.40 | 11.40 | .91 | 1.33 | 11.44 | 11.44 |
| Japan | 2.74 | 2.93 | 52.47 | 44.52 | 2.72 | 2.89 | 53.48 | 44.80 |
| Korea | 3.92 | 5.07 | 44.12 | 42.85 | NR | NR | NR | NR |
| Pakistan | 1.91 | 2.11 | NR | 18.96 | 1.70 | 1.99 | NR | 18.96 |
| Philippines | 2.35 | 2.45 | 37.20 | 37.20 | 2.18 | 2.28 | 35.18 | 32.63 |
| Singapore | 1.71 | 1.85 | NR | NR | 1.71 | 1.85 | NR | NR |
| Sri Lanka | NR | 1.98 | 39.47 | 31.76 | NR | 2.01 | NR | 25.44 |
| Thailand | 2.13 | 2.22 | 36.97 | 34.99 | 1.71 | 1.81 | 29.61 | 28.05 |

NR—Not Reported. Source: Energy Information Administration, 1980 International Energy Annual (issued Oct. '81). Gasoline and fuel oil prices are for the capitals of each country except the U.S., which is an average. All gasoline prices are retails, including taxes and customs duties. For prior data, see NPN Factbook, Mid-June 1981, P103.

# Giant Volumes, Hair-Thin Margins, Big-Ticket 'Fuel Stops' Take Over

**They cost an awful lot of money to build and the risks are high. But those very high volume self-serve diesel and gasoline "fuel stops" springing up around the country now show promise of becoming the hottest thing in motor fuel marketing since self-serve pumpers and multipump convenience stores.**

The successful ones, say sources who have them, are showing a better percentage of return on investment than the pumpers or stores.

Some of the industry's high-flying independents have been captivated for some time by the gallonage and cash-flow potential of such units. Now, some refiner-marketers are catching the fever.

Typically, such units offer several lanes of self-serve diesel dispensers for truckers as well as 10 or 12 self-serve gasoline hoses for motorists. They also have a small convenience food store which may or may not offer fast foods.

**By Marvin Reid**
**Editor-In-Chief**

A typical unit costs $700,000 and up to build, including land. Since this is roughly twice the investment required for a pumper or super-size C-store, many marketers have been slow to jump aboard the bandwagon.

But most of those who have are ecstatic over typical gallonage and payout.

A typical ground-up "fuel stop," say these sources, will pump 700,000 gal. of diesel and gasoline per month. It will do another $35,000 in store sales.

At these volume levels, a unit operating on a 4¢ gal. rack-to-retail fuel margin will show a gross profit of $28,000 a month on fuel sales alone. If the average markup on store sales is 35%, the store will produce another $12,250, or a total monthly gross of $40,250.

The units are operated much like a pumper or multipump C-store with salaried cashiers. Due to their volume of business, however, some figure monthly expenses at around $25,000.

This leaves a net profit of about $15,250 per month or $183,000 in annual pre-tax net income.

On a percentage basis, point out the experts, this means a return on investment (ROI) of more than 25% on an annual basis. And some who have rehabilitated older units for such combination motor fuel operations report ROIs of 40% or greater.

## Stores Vs. Pumpers

The typical fuel stop represents a much larger investment than a multipump C-store or self-serve pumper, say several marketers, but the potential payout is far greater.

Truman Arnold, the large Texas-based independent, says it now costs him $350,000 to build one of his Road Runner salaried super-size C-stores. He estimates a large self-serve pumper with just a

REGULAR
1.16 9
DIESEL
1.15 9
DIESEL
EXIT ONLY
EXIT ONLY

kiosk-type store will cost a minimum of $300,000 now.

If rack-to-retail gasoline margins are 6¢ gal. and the margins on store sales are 35%, Arnold projects a multipump store's gross profit will be $22,750 per month if it pumps 175,000 gal. of gasoline and sells $35,000 "inside." After deducting $15,000 for monthly operating expenses, he winds up with a net profit of $7,750 per month or $93,000 per year.

A self-serve pumper with a 200,000 gal. a month volume on a similar 6¢ gal. rack-to-retail margin will gross $12,000 from gasoline. If its "mini-store" sells $10,000 of convenience items on a 20% margin, it grosses another $2,000 or a total $14,000 per month.

But minimum operating expenses for such a pumper, Arnold figures, will run $12,000 a month now. This leaves it with a net profit before taxes of just $2,000 per month or $24,000 a year.

Arnold says the annual ROI on a pre-tax basis for such a store is plus-25% but only 8% for the pumper.

A "rehab" fuel stop that pumps 400,000 gal. on a 6¢ margin and has store sales of $35,000, meanwhile, can show a pre-tax net profit of $195,000. If the investment in it is $500,000, the ROI is 39%.

## Cash Flow Bonanza

But the ultra high gallonage of the fuel stops has attractions in addition to the actual sales revenues. As some point out, a high-volume fuel stop clearly illustrates why large volumes are always more important to fast-moving gasoline marketers than high margins.

There may be no retail endeavor that can match the cash-flow potential of a high-volume motor fuel outlet.

A source points out that one of the new fuel stops might easily move 25,000 gal. a day or 750,000 gal. a month. If the average cost of fuel to the station is $1 per gal., it is turning over a $25,000 fuel inventory each day.

Some suppliers still allow a distributor 15 days to pay for his fuel purchases, this source says. A distributor with such an arrangement has free use of his supplier's money for 14 days. All of this builds up to a total of $350,000 of "surplus" cash at such volume figures.

In addition, the high-volume fuel stop marketer enjoys the same 25-day grace period, in most states, that other marketers have before transferring tax collections to the government. If total taxes are 12¢ gal., he accumulates $3,000 daily and soon has another nest egg of $75,000.

His total now is $425,000 of surplus cash. Subtract this from the $700,000 investment in such an outlet, this marketer says, and the actual total investment is only $275,000.

Or, to look at it another way, the $425,000 invested at 20% interest will return $85,000 a year. The pre-tax net income, including proper management of the daily cash flow, from such a unit can easily hit $250,000 a year.

## Lowest Margins Yet

Many gasoline marketers thought that the self-serve pumpers and multipump C-stores of the 1970s took margins to rock bottom. But some of the large independents building their very expensive fuel stops now base their projections on still lower margins.

Although rack-to-retail margins are lower in some gasoline markets, most seem to have settled out at a minimum of about 6¢ gal. from rack costs.

The fuel stop marketers figure they can drop down to 3¢ or 4¢ to achieve their gallonage objectives.

So far, the fuel stops are being built primarily on interstate highway locations because truckers are their main customer targets. But where one does go in near a self-serve pumper and, say, a multipumper C-store, the economics would seem to favor the fuel stop, the store and the pumper, in that order.

The fuel stop, if it achieves its gallonage goal, can sell on a 4¢ margin and gross its $28,000 on fuel sales per month. The multipump C-store, selling 175,000 gal. or one-fourth as much fuel on a 6¢ margin, will gross $10,500. But if each also has $35,000 a month in "inside" sales at a 35% markup, that's another $12,250. So, the fuel stop winds up with a monthly gross profit of $40,250 and the store has a total of $22,750.

If the self-serve pumper sells 200,000 gal. of gasoline on a 6¢ margin, it grosses $12,000 a month. If it sells $10,000 in other items on a 20% markup, this adds another $2,000 to the gross profit, or a total of $14,000.

The fuel stop and multipump C-store people figure the self-serve pumper, in effect, is being squeezed out.

## Bloody Fights Ahead

Marketers who are building the fuel stops admit they are high-risk investments. Just spending $700,000 or so on a retail outlet doesn't guarantee it will move 700,000 gal. a month.

But reports so far indicate most such

**Typical ground-up 'fuel stops' will move 700,000 gal. of diesel and gasoline a month. They'll achieve another $35,000 in store sales. Gross income can be $40,000 a month and more. Two such units, operating under 'Ecol' and 'Road Runner' private brands (below), wage war near Little Rock.**

ecol
REGULAR
DIESEL
1.16⁹
1.15⁹
Road Runner
1.16
Self Serve
DIESEL
THRIFTY LIQUOR
BEER
LIQUOR
OPEN THANKSGIVING
PECANS

units are highly successful.

Ken Pritchard of Jackson, Miss., seems to be the leader among large superjobbers building such facilities at present. He has a number of his "Ecol" branded units in Mississippi, Louisiana, Arkansas and Texas and is continuing to expand. There are reports that he recently had plans to build 15 more.

R. R. (Bob) Morrison of Vicksburg, Miss., is another jobber who reports good success with such units. Ray Colson of Little Rock has one; Tom Love of Oklahoma City will soon open his first in Amarillo, Tex.; Tom Patton of Atlanta has one in Sikeston, Mo., and Truman Arnold of Texarkana has several and is building more.

One of the more interesting confrontations may take place soon near Shreveport, La., on I-20.

Ken Pritchard several months ago put in one of his Ecol units west of Shreveport near a huge Union Oil conventional truckstop. There are reports that it has been pumping more than 1-million gal. a month, drawing other large independents like a magnet to observe the layout.

Now, it's said, Jack Cardwell of El Paso, Tex., is putting one of his "Petro" stops in near both. Observers anticipate some lively price activity, indeed, as all three units compete for business.

Arnold and Pritchard have been having a little skirmish in Little Rock, too, where an Ecol unit and a Road Runner are a short distance apart.

Marketers investing in the fuel stops expect competitive conditions to heat up as more and more of the units are built. From most reports, however, construction activity is proceeding at a furious pace.

There are reports that Delta Marketing of Nashville, Tenn., however, may be slowing up some.

Delta, according to some sources, probably started the self-serve diesel trend with its "Red Ace" units and now has eight or more. A commercial realtor in Ohio reports that Delta recently cancelled plans to build three units in that state on prime locations.

The realtor said he was told that the company is slowing down on some of its building plans due to the recent acquisition of another company.

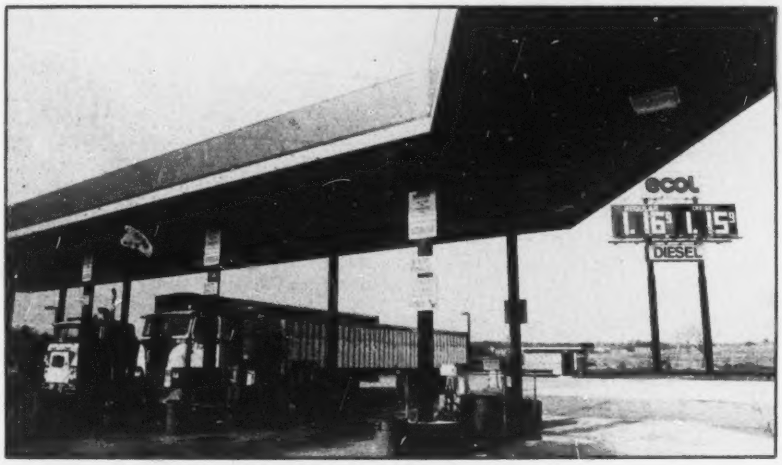
The marketing vice president of a medium-size refiner-supplier, meanwhile, says the fuel stop concept has him terribly excited.

"We've got 34 good interstate locations," he says. "I'm dying to try one."

But while refiners have the cash to invest in the big units, many could have problems attempting to copy the independents. Almost all of the units at present are salary-operated and have tie-ins with C-stores, at least. Larger companies often find both direct-retail and food-store operations difficult to handle.

Some joint ventures between refiners and the independents are developing. American Petrofina and Willis Reed, a Fina jobber in Beaumont, Tex., formed a new company and built a huge new unit in that city [NPN—Feb. '81, p47]. Reed owns 51% and Fina, 49%, of this venture. Other, similar partnerships are rumored.

It seems a safe bet that suppliers will become progressively interested in the fuel stops as reports continue to circulate about their high volumes.



**The Spartan but functional layout of Ken Pritchard's 'Ecol' units, which pump upwards of 1-million gal. a month, has been getting close observation from other large independents.**

## A Comparison of Multipump C-Stores, Pumpers, and Fuel Stops

| | Salaried Super-Store | Margin | Self-Serve Pumper | Margin | 'Rehab' Fuel Stop | Margin | New Fuel Stop | Margin |
|---|---|---|---|---|---|---|---|---|
| **Sales** | | | | | | | | |
| Gallonage | 175,000 | | 200,000 | | 400,000 | | 700,000 | |
| SOLO* | $35,000 | | $10,000 | | $35,000 | | $35,000 | |
| **Gross Profit** | | | | | | | | |
| Gallonage | 10,500 | 6.0 | 12,000 | 6.0 | 24,000 | 6.0 | 28,000 | 4.0 |
| SOLO | 12,250 | 35% | 2,000 | 20% | 12,250 | 35% | 12,250 | 35% |
| Total Gross Profit | 22,750 | | 14,000 | | 36,250 | | 40,250 | |
| **Operating Expense** | 15,000 | 8.5 | 12,000 | 6.0 | 20,000 | 5.0 | 25,000 | 3.57 |
| **Net Profit** | | | | | | | | |
| Monthly | 7,750 | 4.4 | 2,000 | 1.0 | 16,250 | 4.0 | 15,250 | 2.17 |
| Annual | 93,000 | | 24,000 | | 195,000 | | 183,000 | |
| **Net Gallonage Cost** | | 1.6 | | 5.0 | | 2.0 | | 1.83 |
| **Investment** | | | | | | | | |
| Land | 150,000 | | 150,000 | | 150,000 | | 200,000 | |
| Building & Equipment | 200,000 | | 150,000 | | 325,000 | | 500,000 | |
| Total | 350,000 | | 300,000 | | 475,000 | | 700,000 | |
| **Annual R.O.I.** | | | | | | | | |
| (Pre-Tax) | 25+% | | 8% | | 40% | | 26+% | |

*Sales other than Light Oils. Source: Truman Arnold.

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February, 1982

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## Simmons Oil: Phoenix's Latest Rising Star

How Majors Now View 'Car Care' Programs

NPN
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# Refiners Free To Step Out

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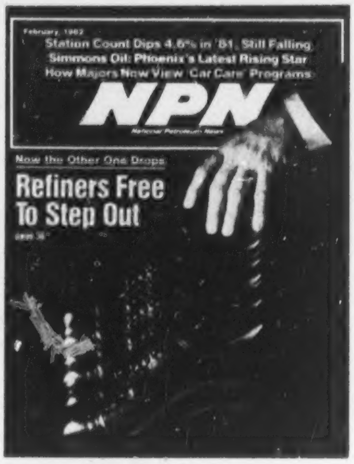
February, 1982
Station Count Dips 4.6% in '81, Still Falling
Simmons Oil: Phoenix's Latest Rising Star
How Majors Now View 'Car Care' Programs
NPN
National Petroleum News
Now the Other One Drops:
Refiners Free To Step Out

**Cover photo by Eric J. Berrick**

## On the Cover

Ever since President Reagan shook the industry by lifting price and allocation controls eight months ahead of schedule last January, marketers have been uneasily waiting for refiners to drop the other shoe. Some changes indeed have taken place the past year. But slow and cautious moves by refiners are no longer constrained by pledges for a one-year "grace period"—the year is up. Refiners may be bolder and more sweeping in their business policy changes than at any time since D-day. Page 36.

## Amoco Market Strategy

Within recent months, Amoco has reduced its field offices from five to three, announced plans to withdraw from 11 states, put its midwestern and western jobbers on terminal pricing plans, tightened up its credit terms and begun experimenting with credit card fees. Sam Van Sickle, Amoco's marketing vice president, offers testimony for the company's moves. Page 40.

## Phoenix Star

The West's Simmons Oil Corp. has become a billion-dollar (sales) wholesaler in about the time it took oil prices to go from $3 to $30-plus per barrel, e.g., less than 10 years. For owner Jerry Simmons, 32, the gasoline shortages that broke the backs of many independents in the 1970s actually turned out to be a blessing in disguise. Page 42.

## Majors' Chips on Dealers

The major oil companies, moving out of intensive involvement in TBA at retail for the better part of a decade, are turning thumbs up to "car care" programs for which dealers take the lion's share of responsibility. The latest retail thrust—"Trust Us, We Guarantee"—is a new pitch for brand loyalty. Page 46.

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# • TRENDS

## Propane-Powered Cars: A New Market to Be Reckoned With?

**Ford's recent announcement that it is going to sell a limited number of propane-powered passenger vehicles this year means that LPG's great adventure is close at hand. The key questions: Can propane make it on its own in the rapidly burgeoning field of exotic motor fuels? And, two, can suppliers and retailers accommodate this new market and gear up for it quickly enough if it makes the big splash that's possible?**

There are tens of thousands of propane-powered trucks, fleet vehicles and agricultural machines already in operation. They've been coming on strong the past several years as gasoline prices sped upwards. Virtually all of these pieces of equipment are conversions, however. Ford is the first major car manufacturer to take the original equipment plunge. In its own way, this gives small but important recognition to LPG as a viable option with a yet-to-be-assessed potential for the future.

Why LPG instead of gasoline? For the consumer, even the disinterested motorist, the economics are exciting. Propane goes for around 50¢ gal. now. That's considerably less than gasoline or diesel. Even if the price goes up, which it undoubtedly will as it acquires acceptance and popularity, it will be a long, long time before it catches up with or surpasses gasoline.

For trucks, fleets and big-league motorists with high mileage records, the savings can be enormous.

Ford says it is going to move slowly. The propane option will be available only on Ford Granadas and Mercury Cougars this year. Fleet operators will get the first crack at them. Next year the market will be broadened to include the general public. Ford expects to sell about 5,000 cars this year, mostly in Canada where tax breaks are available, and 10,000 next year when they can be purchased in U.S. showrooms.

An example of the potential is what is going on in Canada. CNG Fuel Systems, Calgary, recently reported that it plans to open three service stations to handle propane cars. It is looking forward to operating additional stations in Vancouver, Toronto, Edmonton and Montreal. It believes that by 1986, there will be at least 500,000 private and fleet vehicles capable of using propane on the road, and that it will have 500 outlets to service them from coast to coast.

Currently, it costs from $1,200 to $2,000 to convert a car or a truck to LPG. Ford says its original equipment option will be around $900, a savings in its own right. And the lower cost fuel means it can be amortized in a matter of months by the heavy driver, or in 12 to 15 months by the average motorist who does about 10,000 miles a year.

Propane-powered cars are making it big in Europe. A Shell executive recently reported that there are more than 750,000 propane-powered passenger vehicles in Italy alone. The Netherlands has another 350,000. Western Europe is taking it all in stride. So are the retailers, with thousands of places already offering gasoline, diesel and propane to all comers.

Here at home, a national magazine estimated recently that 350,000 vehicles were converted from gasoline to propane in 1981 alone.

The coming of propane as a motor fuel poses a variety of safety and service problems for suppliers, retailers and equipment manufacturers. When diesel fuel, which it may some day rival, made its transition to passenger cars, storage and refueling problems were minimal.

Because LPG is pressurized, greater safety precautions will be required: for storage, for refuelings, for just about everything. The problems can be handled, however. Europeans are now using "dead man controls" and other devices to insure safe refills. U.S. retailers and fleets also seem to have mastered safety problems. This is on a small scale, though. Wide open operations may create even bigger headaches.

Space may be a factor for retailers, too. Many states require storage of propane at safe distances from other volatile fuels and structures. This could mean that propane dispensers might have to be isolated from the conventional islands.

What about self-service? Self-serve motor fuel marketing is legal now in all but two states—New Jersey and Oregon. But it was an arduous affair to get self-service approved in fire and safety codes in many states. Will this tortoise-like process also inhibit the growth of propane in the years immediately ahead? Or will it give full-service stations a leg up on self-service operators?

The implications of LPG are enormous for gasoline suppliers, jobbers, retailers and consumers. Within the next two or three years a free marketplace and a cost-conscious public may make some interesting decisions.

**—J. Richard Shaner**

# • MARKETPLACE AT A GLANCE

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| NOVEMBER | Gasoline (all types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| U.S. City Avg. | $1.351 | $1.297 | $1.369 | $1.462 |
| Regions: | | | | |
| Northeast | 1.379 | 1.330 | 1.386 | 1.462 |
| North Central | 1.336 | 1.294 | 1.360 | 1.425 |
| South | 1.323 | 1.267 | 1.339 | NA |
| West | 1.399 | 1.329 | 1.420 | 1.474 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 12/18/81 | 12/19/80 |
|---|---|---|
| Gasoline (total) | 251,854 | 250,313 |
| Gasoline (unleaded*) | 95,586 | 96,020 |
| Kerosine ** | 44,707 | 48,740 |
| Distillates | 191,087 | 207,182 |
| Residual | 82,094 | 95,870 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

NPN

NATIONAL PETROLEUM NEWS FEBRUARY, 1982

# Service Station Population Down But Not Out

**The service station population in the U.S. is still declining but at a much slower rate than some industry prognosticators had anticipated.**

The Bureau of Industrial Economics of the U.S. Department of Commerce says the population dropped to 151,253 stations by the end of 1981 and that it could be expected to slump another 2.8% to 147,000 by the end of 1982. The 1981 fallout resulted in 4.6% fewer stations than projected at the end of 1980 [see table below].

The Bureau's track record in estimating trends in the service station population has been pretty close to reality through the years, a comparison of past surveys confirms.

This time last year, for example, the Bureau estimated the population would be around 152,000 by the end of 1981. The new projection, issued just last month, differed only slightly.

This is much better, too, than another forecast in early 1981 that said the number of retail outlets in the U.S. had already dipped to 132,000.

Service stations, as defined by the latest study, "Franchising in the Economy, 1980-1982," are those which generate more than 50% of their income from the sale of petroleum products.

They do not include other thousands of outlets connected with convenience stores, mass merchandisers and in rural areas. If these are taken into consideration, a fair estimate of the total service station universe might be around 220,000, according to knowledgeable industry observers.

But while the number of stations continued to decline last year, the dollar volume per station continued to spurt into uncharted realms.

Total sales of products and services, already up 11.3% in 1981, are expected to shoot up another 12% in 1982 to an unprecedented peak of $117.8-billion. By way of comparison, 1981's total was $105.1-billion and 1980's, $94.5-billion.

The projected slump of 2.8% for 1982 in the service station population is one of the mildest in recent years. The last percentage figure to go below this one was in 1977, when the decline was measured tentatively at 2.4%.

Peak year for the service station population was in 1972 when it topped 226,000 outlets. On that basis, the 1982 projection of 147,000 stations would reflect a decline of 35% in approximately 10 years.

One reason the curve in 1981 flattened a bit could be an inverse result of the gasoline glut.

The big push had been to eliminate the 30,000 to 40,000 gal. per month service stations and concentrate on the pumpers. But with gasoline in excess supply everywhere, and national/regional refiners fighting to hold on to their gallonage ratios, there appeared to be a slowdown in the tendency to eliminate outlets for the sake of concentration and efficiency.

What 1982 will bring is another question, however.

Gasoline decontrol occurred almost overnight in January of 1981. But many suppliers took it easy in implementing withdrawal programs they had been planning for years.

Now the fuzz is off the peach, as became obvious in Mobil's determined bid to buy Marathon Oil. Retrenchment is expected to be in full swing in 1982, and what this will do to the total number of outlets remains to be seen [see page 36 for likely refiner moves in 1982].

**Almost 5% of the nation's traditional 'service station' population went by the wayside in 1981. Sales at surviving outlets, however, ballooned 11.3% to $105-billion.**

## Stations Are Down But Dollar Volumes Are Up

| | 1982 | % Change | 1981 | % Change | 1980 | % Change 1982-1980 |
|---|---|---|---|---|---|---|
| U.S. station total (a) | 147,000 | −2.8% | 151,250 | −4.6% | 158,540 | −7.3% |
| Company-owned | 26,460 | −2.8 | 27,225 | −4.6 | 28,537 | |
| Franchisee-owned | 120,540 | −2.8 | 124,025 | −4.6 | 130,003 | |
| Total sales of products and services ($000,000) | $117,762 | +12.0 | $105,145 | +11.3 | $94,470 | +24.7% |
| Company-owned | 21,197 | +12.0 | 18,926 | +11.3 | 17,005 | |
| Franchisee-owned | 96,565 | +12.0 | 86,219 | +11.3 | 77,465 | |

(a) As of Dec. 31 of each year; These are service stations as defined by U.S. Census Bureau, i.e., stations with 50% or more of their income being derived from the sale of petroleum products.

Source: Bureau of Industrial Economics, U.S. Department of Commerce, "Franchising in the Economy, 1980-1982."

## Mobil Owes Other Cos. $50-Million: High Court

**In a decision that ultimately could prove expensive for Mobil Oil Corp. and everyone connected with the company, the U.S. Supreme Court has rejected Mobil's appeal of an Energy Department finding that the refiner owes $50-million to independent refiners as part of the "wind-up" of DOE entitlements.**

The appeal was turned down without comment, with the justices apparently agreeing with government attorneys that further review was unnecessary because the entitlements law expired last September.

Rejection of the appeal does not necessarily mean Mobil will have to pay the $50-million DOE says it owes, because a special appeals court ruling that would permit Mobil to pursue "other avenues of appeal" remains in effect.

The case began early last year when DOE, as part of the phase-out of oil controls, found that Mobil still owed $50-million. Under the entitlements program, companies with access to lower priced, controlled crude oil shared the benefit with smaller independent firms that had to rely mostly on higher priced imported crude—as a way of equalizing crude costs among all refiners. Fighting the DOE claim, Mobil said the smaller firms used manipulation to hide their own controlled crude costs in order to increase the entitlement payments owed them. Until the government corrected that problem, Mobil said, the larger refiners shouldn't have to pay the entitlement payments left over.

## Shaheen Suit Seeks Billions from Mobil

**Entrepreneur John M. Shaheen is pressing a multi-billion dollar damage suit against Mobil Oil, contending in a New York State Supreme Court filing that he was victimized by an economic boycott and an international conspiracy.**

Shaheen's Shaheen Natural Resources Co., New York, owned an 87% interest in the Newfoundland Refining Co., the Provincial Refining Co. and a refinery at Come By Chance, Newfoundland, before all three went bankrupt in 1976.

The oil man alleges that he was "deceived" by Mobil and fraudulently induced to sign away his "first call" rights on oil found in offshore areas—including the Hibernia and Ben Nevis fields which now are being developed as major discoveries.

Shaheen also claims that Mobil used its economic power to encourage a boycott of products manufactured at the refineries in 1974-76. The suit named Japanese, American and Canadian firms. Triple damages of $3.8-billion are being sought.

At presstime, Mobil had no comment saying it had heard about the suit but had yet to be served with the papers.

# API Study Says Independents Gain Greater Market Share

**Subtle but significant shifts in market shares over the past decade are apparent in an American Petroleum Institute (API) "discussion paper" spanning 30 years of oil history.**

Released just before the new year, the study shows that the major and semi-major oil companies have lost ground to the independents in distribution of gasoline and other products.

There's no need to be concerned about the big companies, however. Even though their hold has eroded somewhat, the top 20 still distribute seven out of every 10 gallons of refined products.

The marketing data are only one segment of a study that was intended to demonstrate statistically the decline in energy industry concentration ratios, especially over the past decade [see accompanying table].

Some of the highlights:

**Gasoline market shares:** the top four companies, down 2.2% between 1980 and 1970; the top 8, −5.3%; the top 15, −9.5%; and the top 20, −9.0%. In reverse fashion, this means that independents now account for 9% more of the gasoline market than they did in 1970.

**Refined products:** The story here is similar, with the top 4 down 6.4%; the top 8, −11.2%; the top 15, −12.1%; and the top 20, −10.5%.

**Refining capacity:** The top 4, −3.5%; top 8, −8.5%; top 15, −11.1%; and the top 20, −9.8%.

**Refining throughput:** Here again, the data show comparable decreases in all four categories. Of interest, however, is the fact that while the industry had unused capacity of around 2-million b/d in 1970, the unused total in 1980 was almost 5-million b/d.

The study, entitled "Market Shares and Individual Company Data for U.S. Energy Markets: 1950-1980," was prepared by API's policy analysis department.

A caveat specifies that "the contents of this paper are for the purposes of study and discussion and do not necessarily represent the views of the American Petroleum Institute or any of its members." **N:N**

### The Erosion of Power in Oil Marketing

**(Highlights of an American Petroleum Institute study on the decline of oil industry concentration ratios, 1970-1980).**

| | 1980 | | 1975 | | 1970 | | |
|---|---|---|---|---|---|---|---|
| | Sales | % of National Market | Sales | % of National Market | Sales | % of National Market | % Decline 1970-1980 |
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| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
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| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| **Refined Products (Add 000,000 gal.)** | | | | | | | |
| Top 4 Cos. | 71,852 | 27.6 | 77,677 | 31.0 | 76,573 | 34.0 | −6.4 |
| Top 8 | 114,761 | 46.1 | 128,343 | 51.3 | 139,094 | 57.3 | −11.2 |
| Top 15 | 169,734 | 65.1 | 174,655 | 69.8 | 173,950 | 77.2 | −12.1 |
| Top 20 | 187,670 | 72.0 | 191,702 | 76.6 | 185,892 | 82.5 | −10.5 |
| **U.S. Total** | **260,702** | — | **250,216** | — | **225,305** | — | — |
| [illegible] | | | | | | | |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
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| [illegible] | [illegible] | [illegible] | [illegible] | 80.2 | [illegible] | [illegible] | [illegible] |
| **Refinery Crude Runs (Add 000 b/d)** | | | | | | | |
| Top 4 Cos. | 4,231 | 31.4 | 4,091 | 32.9 | 3,719 | 34.2 | −2.8 |
| Top 8 | 7,323 | 54.3 | 7,174 | 57.7 | 6,627 | 61.0 | −6.7 |
| Top 15 | 9,879 | 75.3 | 9,878 | 79.4 | 9,194 | 84.6 | −9.3 |
| Top 20 | 10,915 | 81.0 | 10,804 | 86.8 | 9,901 | 91.1 | −10.1 |
| **U.S. Total*** | **13,483** | — | **12,442** | — | **10,870** | — | — |

*Includes Puerto Rico

Special note: Because of the shifts in market shares, the companies in the various categories are not automatically the same year after year.

Source: "Market Shares and Individual Company Data for U.S. Energy Markets: 1950-1980," Discussion Paper #014R, American Petroleum Institute.

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**Buyer's Guide Issue**

March, 1982

## Casino Fuel Stop Gambles on Utah Border Trade
## Why a Jobber Chose Liquidation over Bankruptcy
## Chinese Gasoline Rips West Coast Markets

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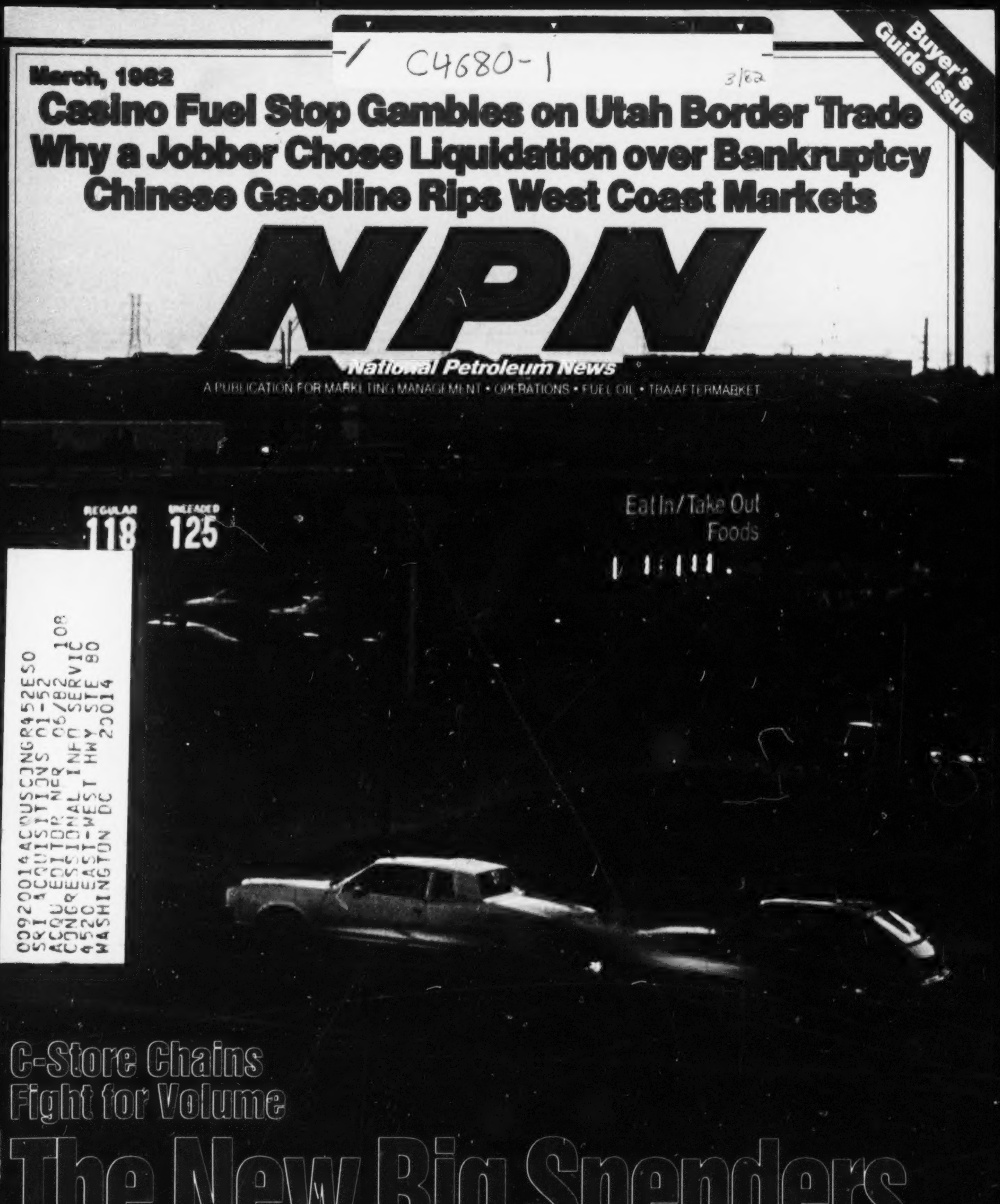

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## C-Store Chains Fight for Volume
# The New Big Spenders
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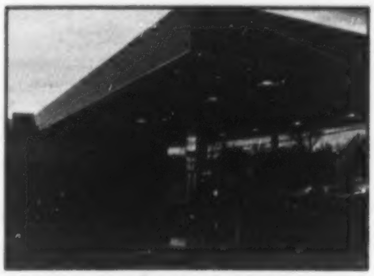


Gasoline was once just another item for them, but today major convenience store chains are posturing for what could become a knockdown, drag-out fight with large independents and majors for market share at the retail level. Page 38.

Michigan marketer Robert Amori was losing $20,000 a month in his two jobber businesses last year, a casualty of the tough free market conditions. Rather than go bankrupt or sell the companies outright, he liquidated piecemeal, gaining a cash flow boost, tax advantages and new business opportunities. Page 44.

With a bullish shake of the dice, some Nevada livestock and gaming interests with no background in oil marketing hope to have travelers on Interstate 80 filling up and crapping out when they open their $11-million casino-truckstop combination next month. Page 46.

# • TRENDS

## Multi-Branders on the Rise In Competitive Price Climate

**A practice which most major suppliers encouraged during the days of critical supply problems under federal price and allocation controls is beginning to rip to shreds something they once took great pride in—jobber loyalty at their product supply racks.**

The trend by branded jobbers today is to purchase product wherever they can at the lowest price.

This is beginning to cause major shifts in the way refiners price their product. Rather than putting the emphasis on meeting retail price competition, as they did before the era of controls, the refiners now find that their real competition for business is at the wholesale racks. Marketers say they don't know whether this trend is good or bad for the industry. They see developing from it, however, a more distant relationship between refiners and jobbers.

Prior to federal controls in the 1970s, almost all branded jobbers were content to fly one company's flag and purchase all of their products from that company. Indeed, there were many fringe benefits to encourage loyalty, including such lucrative items as liberal guaranteed margins during times of depressed retail prices.

The federal controls helped bring this practice to an end. Refiners, hamstrung by the regulations when it came to offering extra supply to their jobbers for growth, generally okayed requests by marketers to turn elsewhere for additional supply. Now, many wish they could turn the clock back to the way conditions were, but they can't.

"We certainly don't like for our jobbers to buy product from other suppliers today," says one marketing vice president, "because we can more than take care of their needs now. But there isn't much we can do about it."

This executive's lament is shared by a number of others. Refiner-supplier people say they often have a difficult time with their production schedules because they can no longer be certain about product purchases by their jobbers.

The jobbers, meanwhile, generally say they may be as loyal as ever to their primary supplier—if that supplier is "competitive with the market." The majority of them quickly add, however, that their particular suppliers are not always competitive, so they shop around for lower prices.

Some jobbers today may be distributors under two or more major brands plus one or more private labels. They have several supply sources and most say they're always shopping for more. One jobber, for example, flies two major flags, his own private label and has 15 suppliers of record. Even so, he says he will turn to the "spot market" when he can buy product in it at a better price.

The value of loyalty to a particular brand is becoming less and less, reports from jobbers indicate. In the prevailing market, one says he will switch from one branded supply source to another for 0.125¢ gal., all other things being equal. The majority of jobbers now talk in terms of 0.75¢ to 1¢ gal. as the breaking point at which they'll switch from a branded to an unbranded source of supply.

"It's lower than that at times," says one large jobber. "In this business today, you've got to really put the pencil to your net-net buying price. You have to take into account cash discounts, hauling allowances, rebates and anything else you can get out of a supplier. You have to figure out exactly what you are paying and what the next guy is paying. If you are priced out of the market by as little as a penny, you've got problems."

Marketers say it takes just such close figuring to survive in today's cutthroat price competition at retail.

Refiners increasingly are trying to hold jobbers to whatever promises they have made for purchasing certain amounts of product. Recently, according to some jobbers, a few of the larger majors have "become a lot more hard-nosed" about their distributors buying elsewhere.

At the same time, most of the refiners have become far more sensitive to price conditions at wholesale.

One jobber who purchases product from three majors and as many as a dozen independent refiners says one of his majors now requests a rundown on other wholesale prices available to him when he pleads for a price reduction. If he can prove to this company that he is getting product offered to him at lower prices, he sometimes gets the reduction.

"You spend your time now checking the lowest wholesale prices," says the jobber. "In the past, you ran retail price surveys to get price protection."

Some jobbers, of course, are tempted to play price games with their suppliers but most majors say they avoid this. "They [jobbers] let us know quickly what our competitors are offering and this is valuable information for us," says one major. "But they are not going to beat us over the head on prices."

Maybe not, but many jobbers say they are kept busy these days fighting off solicitations from competitive suppliers trying to get some of their business. This circumstance is causing refiners to be increasingly competitive at their wholesale supply docks.

**—Marvin Reid**

# • MARKETPLACE AT A GLANCE

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| DECEMBER | Gasoline (all types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| **U.S. City Avg.** | $1.348 | $1.293 | $1.365 | $1.460 |
| **Regions:** | | | | |
| **Northeast** | 1.376 | 1.329 | 1.381 | NA |
| **North Central** | 1.333 | 1.289 | 1.357 | 1.424 |
| **South** | 1.321 | 1.264 | 1.340 | NA |
| **West** | 1.390 | 1.320 | 1.408 | 1.471 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 1/22/82 | 1/23/81 |
|---|---|---|
| **Gasoline (total)** | 257,383 | 272,156 |
| **Gasoline (unleaded*)** | 99,582 | 101,748 |
| **Kerosine **** | 47,109 | 50,804 |
| **Distillates** | 174,521 | 185,047 |
| **Residual** | 79,020 | 84,905 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

# Money Handlers Target Gasoline Receipts

**The Petroleum Equipment Institute (PEI) is getting lots of calls at its Tulsa, Okla., headquarters nowadays from market researchers connected with large banks, credit card companies, computer concerns and electronics manufacturing firms, reports Howard Upton, PEI's executive vice president.**

There is much significance in the inquiries, Upton believes. Such outfits see the possibility of automated gasoline marketing on the near horizon and they want in on the action.

Upton says there is a $500-million a day reason why such outfits are interested. He estimates the amount is roughly equal to the daily gross receipts in the retail gasoline business, assuming about 10-million b/d of motor fuel consumed at around $1.20 gal., including taxes.

The financial community gets turned on when it considers all that money and how much could be made helping marketers handle it. Suppose, says Upton, one is able to offer an oil marketer an automated dispensing program, tied into a computer network, that would permit the dollar value of a motorist's gasolihe purchase to be transferred from the motorist's bank account to the oil marketer's bank account in less time than it takes the customer to get the nozzle back into the dispenser boot.

The people who provide such services usually charge a nominal service fee, says Upton. If all of the estimated daily gross figure is considered, he adds, a fee of one-half of 1% would generate $2.5-million a day. A 3% fee would generate $15-million a day.

A relatively small number of financial organizations could emerge with the lion's share of business if the nation does, indeed, turn to automated cash-transfer dispensing, he says, and none wish to be left out. **N:N**

Photo by Peggy Swart

**Banks, credit card issuers, computer and petroleum equipment firms are vying heatedly to wire existing technology for automated cash transfers at the gasoline pump.**

# Earnings in 1981 Soft But Substantial

**Oil company profits in the year 1981 were generally on the weak side although that did not deter at least ten of the leaders from racking up anywhere from $1-billion to more than $5-billion in net earnings [see table].**

There were many minus signs in the fourth-quarter and year-end reports. Except for one company, however, the negative results were not losses per se, they merely reflected the fact that the companies did not make as much as they did in the preceding year.

The one company that took a bath in its 1981 earnings was Cities Service. It discontinued its plastics business and wrote off $290-million in the process. That gave Citgo a net loss of $49-million for the year compared with a net gain of $478-million in 1980.

Sloppy product prices, declining consumption and the general downturn in business all contributed to the weak returns in 1981.

Companies that earned a billion or more were Exxon, Mobil, Texaco, Standard of California, Standard of Indiana, Gulf, Shell, Atlantic Richfield, Standard of Ohio and Sun. Conoco made $1-billion in 1980 but because it was merged into DuPont last year, it will be hard to relate its earnings to past performances. **N:N**

## Income Scoreboard: How Oil Fared in 1981

(Millions of dollars)

| Company | 4th Qtr. 1981 | 4th Qtr. 1980 | % Chng. | Full Yr. 1981 | Full Yr. 1980 | % Chng. |
|---|---|---|---|---|---|---|
| Exxon | $1,065.0 | $1,340.0 | (20.5)% | $5,565.0 | $5,650.0 | (1.5)% |
| Mobil | 588.0 | 558.0 | 5.4 | 2,434.0 | 2,813.0 | (13.5) |
| Texaco | 507.0 | 500.0 | 1.4 | 2,310.0 | 2,240.0 | 3.0 |
| Stand. of Calif. | 571.0 | 615.0 | (7.2) | 2,380.0 | 2,400.0 | (1.0) |
| Stand. of Ind. | 384.0 | 402.0 | (4.5) | 1,921.8 | 1,915.3 | — |
| Gulf | 301.0 | 304.0 | (1.0) | 1,230.0 | 1,140.0 | 7.9 |
| Shell | 458.0 | 409.0 | 12.0 | 1,701.0 | 1,500.0 | 13.3 |
| Atl. Richfield | 469.8 | 398.3 | 18.0 | 1,671.3 | 1,651.4 | 1.2 |
| Stand. of Ohio | 477.8 | 475.8 | — | 1,946.0 | 1,811.0 | 7.4 |
| Sun (a) | 488.0 | 30.0 | 1,526.6 | 1,076.0 | 723.0 | 48.8 |
| Phillips | 186.5 | 287.0 | (35.0) | 897.4 | 1,069.6 | (17.8) |
| Getty | 216.5 | 211.1 | 2.6 | 856.9 | 871.7 | (1.7) |
| Union | 236.0 | 177.2 | 33.2 | 791.4 | 647.0 | 22.3 |
| Amerada Hess | 48.2 | 106.6 | (54.8) | 212.6 | 540.2 | (60.6) |
| Cities Service (b) | (275.0) | 107.8 | — | (49.2) | 477.5 | — |
| Marathon | 40.1 | 55.3 | (27.5) | 343.1 | 379.0 | (9.5) |
| Ashland(*) | 47.5 | 20.2 | 135.1 | — | — | — |
| Kerr-McGee | 66.0 | 51.8 | 27.4 | 211.1 | 182.2 | 15.9 |
| Diamond Shamrock | 59.7 | 54.6 | 9.3 | 230.2 | 201.2 | 14.4 |
| Murphy | 41.4 | 45.6 | (9.2) | 165.9 | 150.5 | 10.2 |
| Amer. Petrofina | 17.0 | 19.3 | (12.0) | 74.1 | 104.3 | (29.0) |
| Pennzoil | 54.8 | 77.5 | (29.2) | 221.6 | 308.5 | (28.2) |
| Quaker State | 6.7 | 5.5 | 21.8 | 27.4 | 25.8 | 6.2 |
| Tosco | 30.1 | (9.8) | — | 22.6 | 46.1 | (51.0) |

(a) Includes $299-million for sale of some U.S. and Canadian assets; (b) Reflects loss of $290-million in discontinuance of plastics business; (*) 1st quarter, fiscal ends 9/30/82.

# The New Big Spenders

## Convenience Chains Fight for Volume

REGULAR
118
UNLEADED
125
Eat In/Take Out
Foods

**Gasoline was once just another item for them, but today major convenience store chains are posturing for what could become a knockdown, drag-out fight with large independents and majors for market share at the retail level.**

Many small jobbers, service stations and C-stores could be caught in the crossfire and severely hurt.

**By Bonnie J. Davis**
**Operations Editor**

Some things the large chains are doing now that prove their commitment to motor fuel marketing include:

- **Huge investments.** The larger chains are matching the big gasoline marketers in multipump C-store expenditures. Many are being constructed in the $500,000 to $750,000 per unit range. At least one investment has exceeded $1-million.
- **Direct purchase deals.** The chains, for the most part, have gained much expertise in motor fuel buying. Agreements now are being made to buy directly from the refiners or other sources who have the lowest wholesale prices.
- **High volume targets.** The chains, with big, elaborate installations, now seek minimum volumes of 100,000 to 150,000 gal. a month. This is in line with most large gasoline marketers who operate "su-

per'' size convenience outlets.

Gasoline marketing in the 1980s, say some C-store chains, just might belong to them: the chains have come of age in their gasoline buying and retail practices.

According to the 1981 *Convenience Store News* Industry Report, gasoline sales totaled $8.1-billion of the $22.7-billion in total convenience store sales in 1980. This was a 55% increase over 1979. The report also states that about 44% of all C-stores offer gasoline, a 4% increase over the previous year.

An *NPN* survey found that of the 19,502 stores affiliated with the top 20 chains, 9537 have gasoline facilities, or 49% [see table].

The larger chains are making the biggest commitments to gasoline. Southland Corp. (with its 7-Eleven and Super 7), Circle K, National Convenience Stores (NCS) and Jitney-Jungle are four chains firmly dedicated to gasoline with plans to expand in this area. Southland recently opened its first ''tri-combination'' in Dallas, with a 7-Eleven, Chief Auto Parts Store and ''Super 7'' gasoline outlet all sharing a common site [NPN—Jan. p47].

NCS has seven Stop N Go ''Superstores,'' outlets which feature eight- to 16-hose gasoline operations combined with oversize C-stores.

Jitney-Jungle says all future construction of its Jr. Food Marts will have gasoline facilities. It already has large super pumpers with some units. Circle K recently opened its first eight-hose outlet with a C-store in Albuquerque, N.M., the first of several of these units planned.

## Big-Time Investments

The per-unit investments in ''super'' store gasoline combinations being made today by the large chains are a far cry from the typical low-cost, two-dispenser installations of the early 1970s.

Today's multipump supersize outlets can represent investments ranging from $225,000 to more than $1-million, depending on the cost of real estate and the size of the C-store attached. The units usually are projected to average 100,000 to 150,000 gal. a month with inside sales ranging from $30,000 on upwards.

### • Jitney-Jungle

Jitney-Jungle is the Jackson, Miss., based chain of 336 outlets in 17 states in the South and Southeast. All of its units offer gasoline.

Lee Crook, director of franchise development for the chain, says the company estimates that the cost of its super pumpers with 10 to 12 hoses and an 800-sq.-ft. C-store is $225,000 with between $80,000 and $100,000 for gasoline equipment alone. This compares to an estimated $150,000 for its standard 2,200-sq.-ft. Jr. Food Marts with four hoses.

The super pumpers average 100,000 gal. a month with $20,000 inside sales, while the standard stores sell between 35,000 and 40,000 gal. a month with inside sales ranging from $35,000 to $40,000 a month.

Crook says the minimum sales requirements for the super pumpers are 85,000 gal. a month with $16,000 inside sales.

The regular Jr. Food Marts must sell 25,000 gal. a month with $30,000 inside sales to break even.

The gasoline margin for the Jitney-Jungle chain averages 8¢ gal., varying from location to location. Almost all of the units operate with one person per shift and the majority are pre-pay operations.

Crook says Jitney-Jungle plans to build the smaller C-stores with its multipump operations, building these units in metropolitan areas with populations over 100,000, such as Dallas and Houston.

### • Circle K

Circle K is the nation's second largest C-store chain with 1,214 stores, 776 with gasoline. The stores sell the company's ''Aero K'' brand gasoline and in 1980 the chain sold 192.5-million gal. Gasoline accounted for 35.2% of the company's total sales that year.

The company was scheduled to open its first eight-hose store in Albuquerque this month.

Mike Sroda, Circle K gasoline marketing manager, says that the average Circle K C-store with four hoses averages 30,000 gal. a month, accounting for about 45% of total sales at the unit.

The multipump operations, he says, will have to dispense 60,000 to 70,000 gal. a month to break even, but are projected to double that amount and account for 65% of the total sales at a typical unit.

The Circle K C-stores average 2,400 to 2,500 sq. ft. and usually operate with one or two employees per shift. All the gasoline outlets are pre-pay.

### • National Convenience Stores

NCS, the Houston-based chain, has 965 stores, 588 which sell gasoline. Included in this figure are its Superstores, outlets that feature eight to 16 hoses combined with 3,600- to 4,800-sq.-ft. C-stores. NCS's standard store averages 2,650 sq. ft. The company plans to sell 200-million gal. of gasoline in fiscal 1982.

Jerry R. Welch, NCS's vice president of finance, says the Superstores' average cost of construction is $750,000, with $100,000 of this amount spent for gasoline equipment. The cost of building standard units with four hoses is estimated at $400,000. [See profile on following page.]

All NCS's units are pre-pay, operating on an average margin of 7¢. The Superstores pump between 100,000 and 150,000 gal. a month and the standard stores, 33,000 gal. a month.

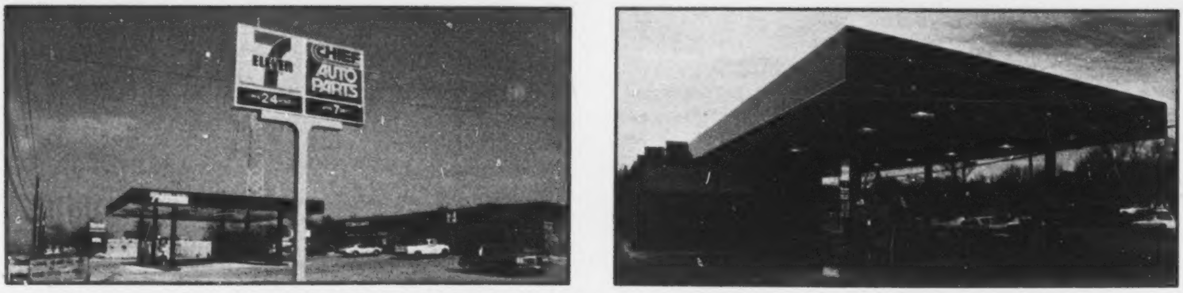
Gasoline sales at an average Superstore account for 50% of the unit's total sales, says Bob Chramosta, NCS's gasoline marketing manager. Welch adds that the Superstores do between two-and-a-half and four times the business of NCS's standard outlets.

### • Southland

Southland is the nation's largest C-store chain with almost 7,000 stores. Its tri-combination in Dallas cost an estimated $1.3-million to put into service

| Convenience Store Chain | Total Stores | Stores with Gasoline |
|---|---|---|
| Southland | 6987 | 2421 |
| Circle K | 1214 | 776 |
| Sun—Stop-N-Go | | |
| Fast Fare | | |
| Zippy Mart | 1189 | 650 |
| Cumberland Farms | 1105 | 403 |
| Convenient Food Mart* | 1033 | 417 |
| Munford | 990 | 471 |
| National Convenience Stores | 965 | 588 |
| UtoteM | 951 | 600 |
| The Lawson Co. | 702 | 34 |
| Atlantic Richfield | 700 | 700 |
| The Pantry | 477 | 410 |
| Little General Stores | 459 | 209 |
| Shop & Go | 404 | 230 |
| Cities Service | 370 | 370 |
| Sunshine Jr. Stores | 354 | 307 |
| Dillon Companies | 348 | 248 |
| Jitney-Jungle | 336 | 336 |
| Casey's General Stores | 332 | 332 |
| High's Dairy Stores | 326 | 35 |
| White Hen Pantry | 260 | 0 |

*Convenient Food Mart's largest regional franchisee is CONNA Corp., which has 416 C-stores, 314 with gasoline facilities.



**Southland's Super 7 (left) and Jitney-Jungle's Jr. Food Mart prototypes are examples of the expanded and expensive multipumpers being built today by the C-store chains. Located on major thoroughfares, the units are aiming for volumes of 100,000 gal. a month and up.**

[above]. The Super 7 outlet is projected to move between 150,000 and 200,000 gal. a month, says Southland, and on a 6¢ per gal. margin. The Super 7 unit is located in front of a 2,400-sq.-ft. 7-Eleven and similar size Chief Auto Parts store, both Southland-owned operations.

The Dallas unit is the first of its kind for Southland. Of the 6,987 7-Eleven stores in the chain, 2,421 sell gasoline. This accounted for almost $913-million in gasoline sales alone for 1980, or 23% of total sales for the C-store chain.

### Adept Buyers

The convenience store chains have learned a great deal about gasoline purchasing since the early 1970s when jobbers introduced them to branded and unbranded product buying practices.

In the early stages, the jobbers often made commission deals with the store operators. Typically, one would install a couple of dispensers at a low investment, then pay the store owner 2¢ gal. The store operator was pleased if his rent was covered.

As time passed, however, the C-store operators became increasingly aware of the total margins between refiner wholesale postings and retail prices. They began seeking a bigger piece of the pie.

For awhile, especially during the period of supply allocations, jobbers were able to hold their store accounts at bay, although many had to start splitting total rack-to-retail margins with the stores.

During the brief supply shortage periods, the store chains were forced to scramble for gasoline supply, much the same as most other marketers. The chains learned how the "spot market" operates in addition to the other intricacies of buying gasoline at wholesale. It was during this period when many chains began hiring expert gasoline buyers from major oil companies.

For example, Circle K's Sroda came from Texaco, NCS's Chramosta from Shell and the buyers for Southland (Sam Susser) and Cumberland Farms (Bob Quinlan) have strong gasoline backgrounds.

Today, a few chains still have supply arrangements with jobbers, but most want to go directly to the refiners or other primary sources of supply. A few of the larger chains have become expert enough with large enough volumes to purchase in barge or pipeline quantities at the lowest spot market prices available.

This means they may be buying product at times 3¢ gal. below the lowest price being paid by a branded jobber.

All the gasoline buyers interviewed say they are paying at least the prevailing rack prices for product. According to one industry source, the original agreement struck between Chevron and Circle K called for the latter to pay 3.5¢ gal. below the dealer tankwagon price for Chevron product. Circle K buys 43% of its gasoline from Chevron.

Woody McFarland, director of petroleum operations for Munford, Inc., which operates 471 gasoline units at its Majik Markets, says about three-fourths of his company's gasoline purchases are bought direct from the refiner. Gulf Oil is a major supplier to Munford.

Some 70% of the gasoline NCS buys is direct from the refiner, says Chramosta, and one refiner supplies 25% of that amount.

All of the buyers say they use several suppliers, hedging against another shortage.

### New Squeeze Action

In effect, the very large convenience store chain and large gasoline chain retailer with C-stores may be starting out "from the gate" now at roughly the same buying price. Because each has his operations geared to where he can go below 5¢ gal. rack-to-retail and still break even, the typical jobber or dealer who requires a much larger margin is caught in a squeeze.

If the two forces begin fighting each other to reach or maintain their motor fuel gallonage requirements in a particular market, it may well be that the knockout punch, inevitably, will be delivered to the many "conventional" marketers who need bigger margins in a hurry.

## Innovative NCS:

# Nonplusing the Competition with Superstores

**In 1979, when National Convenience Stores, Inc. (NCS) opened its first "Superstore"—a 3600-sq.-ft. C-store with eight gasoline dispensers out front [see the cover]—competitors called it "Van Horn's Folly," mocking the company's president and chief executive officer V. H. "Pete" Van Horn. The competition stopped laughing when the Houston-based chain's gargantuan C-store/multipumper became profitable in its second month.**

NCS is an excellent example of how some major C-store chains are now making heavy capital commitments to the retail motor fuel business.

Today, it has 950 stores in 11 southern and southwestern states, operating under the names Stop N Go, Shop N Go, Super Duper and Hot Stop. Some 588 offer self-service gasoline and the company projects that gasoline sales for its 1982 fiscal year will top 200-million gal.

NCS builds its stores big and doesn't back away from very large investments.

The company spends about $400,000 to build just a standard size (2,650-sq.-ft. store with four self-service hoses) NCS unit, a figure that many large gasoline marketers would consider their maximum investment. These stores feature the latest in equipment and are on prime locations. But the cost is only the beginning in terms of what NCS calls its "Superstore."

The average investment for one of these gigantic units is $750,000 (including real estate) with the gasoline equipment alone exceeding $100,000. These stores range in size from 3,600 to 4,800 sq. ft., with one as large as 5,500 sq. ft. They have from eight to 16 gasoline hoses.

NCS operates seven Superstores and plans to open six to 10 more this year. Each unit is expected to do two-and-a-half to four times the business of NCS's stan-

A major feature of the Superstores is that gasoline islands and stores are connected by attached canopies, offering full protection from the elements for customers.

Some of the outlets boast a pneumatic tube system, similar to those at a drive-in bank. With the pneumatic tubes, a customer doesn't have to walk into the store. As with the standard Stop N Go units, all of the Superstores are equipped with intercom systems. In addition, the Superstores have water and air units.

All of these features are included as the result of ongoing customer surveys, says Chramosta.

Chramosta, who does all the gasoline purchasing for the company, says the chain's average margin is 7¢ gal. with posted prices for regular grade usually 2¢ to 4¢ below branded majors. Welch says margins at the Superstores are comparable to those at the two-pump outlets.

Like many large chains, NCS buys 70% of its product directly from refiners. About 25% of the direct purchases are made from one supplier. In addition, supplies are purchased from some jobbers and in larger barge quantities.

Chramosta says he bases his purchases on price and a supplier's past performance during shortfall periods.

Most of the gasoline sold at NCS stores is sold on an unbranded basis.

### Wide Merchandise Mix

The average NCS C-store carries 3,000 different items, including fast food. The additional space at the Superstores is devoted to an expansion of fast food and non-food categories.

The Superstores place a greater emphasis on NCS's Hot Stop line of fast food and pre-packaged meals, which include not only sandwiches but offer entrees such as meatloaf and lasagna. The items are merchandised in fast food centers that provide microwave ovens, beverage counters, condiment areas and inside seating. The food centers operate on a self-serve basis.

Some of the stores have fresh pastries and offer scoop ice cream or draft beer. The Superstores usually have three employees on duty.

Also, the big NCS stores carry a wide variety of automotive items and stock records and tapes as well.

The Superstores, as with the standard NCS outlets, have coin-op video games, with the largest Superstore housing a separate game room with 11 video games. The room is soundproofed and isolates the noise and loitering from the main store.

Last year, NCS's stores averaged $649,000 in sales, a figure that includes both units with gasoline and those without. According to Welch, the average margin on inside sales is between 30% and 35%. He adds that all NCS stores are profitable within two to three months of becoming operational.

Even though additional employees are needed to operate the Superstores, says Welch, the stores more than cover the additional overhead.

Welch, Chramosta and NCS view the Superstore as the "wave of the future" for the convenience store business. If the maverick NCS proves accurate in its planning, with its sights set on big volume motor fuel sales, it could be Van Horn and his "folly" sharing the last laugh in the modern oil market.

**Ranging in size from 3,600 to 5,500 sq. ft., the NCS Superstores stock an average of 3,000 items and offer expanded fast-food and non-food lines such as automotive. Spurring impulse sales at some stores are inside seating and video game areas.**

# More Gasoline Being Sold at More C-Stores

**Although the pace has slowed from the hectic days of the early 1970s, the uphill climb of gasoline sales in the convenience store channel continues to be impressive.**

This is confirmed by the latest pair of reports on gasoline and groceries from private and government sources. The private report covers the year 1980; the federal report, 1981 with a projection for 1982.

The independent research, the 11th annual "Dollars Per Day Survey of the Small Food Industry," indicates that C-stores sold about 5.3% of all the gasoline marketed in the U.S. in 1980.

Consumption declined in 1981 but industry sources believe the 5.3% percentage probably held up in 1981; possibly even improved because convenience store chains seem to have been more active in gasoline additions than conventional retail-oriented oil marketers.

The Dollars Per Day study is prepared by John F. Roscoe of Walnut Creek, Calif., a C-store chain operator in his own right. His study covers only about a third of the entire C-store industry, however—the 12 chains that are publicly owned.

These chains operated 12,445 stores in 1980, of which 44.45%, or 5,533 units,

**Gasoline Total Trebles in Seven Years**

| Survey Report | No. of Stores | No. of Stores with 'Gas' Units | % Increase | No. of 'Gas' Units Added During Year | No. of Stores with 'Gas' |
|---|---|---|---|---|---|
| 1981(a) .......... | 12,445 | 5,533 | — | 442 | 44.45% |
| 1980 ............ | 13,167 | 5,630 | 9.3% | 447 | 42.76 |
| 1979 ............ | 12,920 | 5,153 | 12.4 | 569 | 39.88 |
| 1978 ............ | 12,597 | 4,584 | 20.8 | 792 | 36.38 |
| 1977 ............ | 11,953 | 3,792 | 36.1 | 959 | 31.72 |
| 1976 ............ | 11,356 | 2,786 | 29.7 | 557 | 24.53 |
| 1975 ............ | 10,143 | 2,147 | 9.3 | 194 | 21.16 |
| 1974 ............ | 9,258 | 1,964 | — | — | 21.21 |

(a) Variance results from elimination of one chain in 1981 study

Source: 11th Annual Dollars Per Day Survey of the Small Food Industry, John F. Roscoe, Walnut Creek, Calif., issued January, 1982.

dispensed gasoline. The total included 442 new gasoline facilities in 1980 compared with a total store growth of only 205 units.

The 44.45% ratio of gasoline stores was up modestly over the preceding year's 42.76%. The growth of 1.69% was the lowest in years. In 1980, the growth rate over 1979 was 2.88% and in preceding years the growth rate had been ranging as high as 7% or so.

By sheer size, Southland is the biggest gasoline vendor in the C-store industry. Of its 6,895 stores in 1980, 2,246 sold gasoline, or 33% of Southland's units.

Percentagewise, Hop-In and Sunshine Jr. fared better, however. Of Hop-In's 152 stores, 84% sold gasoline. Of Sunshine's 353 outlets, 82% marketed gasoline.

Roscoe, in his report, estimates there are 39,000 convenience stores in the industry. If the 44.45% ratio is applied here, it could be assumed that 17,336 C-stores had gasoline facilities in 1980.

He notes that the 12 chains in his survey accounted for about 1.9-billion gal. of gasoline sales in 1980. With the same extrapolation as mentioned above, this would give the C-store industry a volume of about 5.8-billion gal., in terms of the study. The national market in 1980 was about 109-billion gal.

Roscoe says the average margin for gasoline in the C-store channel in 1980 was 6¢ gal.

One company fared much better, however, in the breakdown that was available. This was National Convenience Stores which averaged 7.2¢ gal., according to company sources.

In his usual editorial commentary on the latest survey, Roscoe warns C-store operators:

"Gasoline is a little like game machines. Gasoline will produce some margin dollars but not enough to pay a significant portion of your expenses."

He then cites an involved example which indicates that the "gasoline margin is supplying just 25% of the total margin required to break even."

He adds, however, that "gasoline is a product you should probably sell. It undoubtedly increases store traffic. Unfortunately, convenience store operators don't seem to be able to capitalize on customer traffic.

"Unless the concept includes a way to sell customers more than convenience items, gasoline traffic will never be much of a bonanza to store owners.

"Gasoline customers typically buy gasoline from you because you have the best gasoline price. Price customers know better than to give the money back to you in the store."

## Government Data

The federal report on C-stores deals only with franchise operations.

Thus the population it discusses accounts for 16,000 to 17,000 stores—considerably less than half of the presumed total population of 39,000.

The figures are meaningful, however, because they isolate and identify trends.

This report is prepared by the U.S. Commerce Department's Bureau of Industrial Economics. The current one is entitled, "Franchising in the Economy 1980-1982."

It estimates the 1981 franchise population at 16,255 and forecasts a growth to 17,312 in 1982 [see table for details].

Business is booming in the C-store industry, at least in terms of cash flow and the dollar totals. According to the government figures, these C-stores grossed $8.7-billion in 1981 and are expected to rise another $400-million in 1982 to $9.1-billion. How much of this is growth and how much inflation is not indicated in the study.

The accompanying tables are self-explanatory, though it should be borne in mind that the Dollars Per Day study involves only 12 chains and the Commerce Department report considers only franchise operations. The numbers therefore are not comparable and must be viewed as trends only. —J. Richard Shaner.

### Government Convenience Store Projections

| Item | 1982(a) | 1981(a) | 1980 |
|---|---|---|---|
| Total number of establishments | 17,312 | 16,255 | 15,614 |
| Company-owned | 10,076 | 9,694 | 9,679 |
| Franchisee-owned | 7,236 | 6,561 | 5,935 |
| Total sales of products and services (add $000) | $9,052,060 | $8,653,224 | $7,821,186 |
| Company-owned | 5,557,297 | 5,087,539 | 4,722,845 |
| Franchisee-owned | 3,494,763 | 3,565,685 | 3,098,341 |
| Average sales per establishment | $523,000 | $532,000 | $501,000 |
| Company-owned | 552,000 | 525,000 | 488,000 |
| Franchisee-owned | 483,000 | 543,000 | 522,000 |
| Employment | — | — | 108,877 |
| Company-owned | — | — | 68,667 |
| Franchisee-owned | — | — | 40,210 |

(a) Data estimated by respondents.
Source: "Franchising in the Economy 1980-1982," Bureau of Industrial Economics, U.S. Department of Commerce, issued Feb. 1, 1982.

### Distribution by Number of Establishments (1980)

| Size Groups | Franchising Companies Number | Establishments | | Sales | |
|---|---|---|---|---|---|
| | | Number | Percent | ($000) | Percent |
| Total | 28 | 15,614 | 100.0 | 7,821,186 | 100.0 |
| 1001 and Greater | 4 | 10,084 | 64.6 | 5,600,592 | 71.6 |
| 501-1000 | 3 | 2,283 | 14.6 | 884,580 | 11.3 |
| 151-500 | 8 | 2,646 | 16.9 | 1,108,836 | 14.2 |
| 51-150 | 7 | 499 | 3.2 | 169,518 | 2.2 |
| 11-50<br>0-10 | 6 | 102 | 0.7 | 57,660 | 0.7 |

## Quotable Quotes

**In his latest report on C-stores and gasoline, John F. Roscoe came up with some observations that often were tinged with sarcasm and irony.**

Here are some of them:

- "Convenience stores have figured out how to hold down prices and help ruin the market for the traditional [gasoline] marketer. They have not yet figured out how to merge food and gasoline to their advantage."

- "The gasoline business has always been in turmoil. The margins being developed today are probably normal margins. In recent years we have been lucky to have a couple of good gasoline shortages when margins were good. I was surprised to read in some of the annual reports that the present situation is unusual. Low margins are usual in the gasoline business."

- "There are too many gasoline retailers in the business today. We will probably lose at least another 100,000 [sic] gasoline retailers in the next few years. Gasoline margins are likely to be even lower as this process accelerates."

- "Gasoline now represents 31% of the total sales of the chains in the survey. It's closer to 40% if you eliminate 7-Eleven from the computation. It's more than 50% of the dollar sales if you just count units that sell gasoline. The rub is that it represents about 15% of the total margin dollars for the typical store."

April, 1982
$4.00

## Where All the Scary Price Cutting May Bottom Out
## How Jobbers Use Oil Futures to Boost Profits
## Cardlocks: Forerunner to Total Automation?

# NPN

*…tional Petroleum News*

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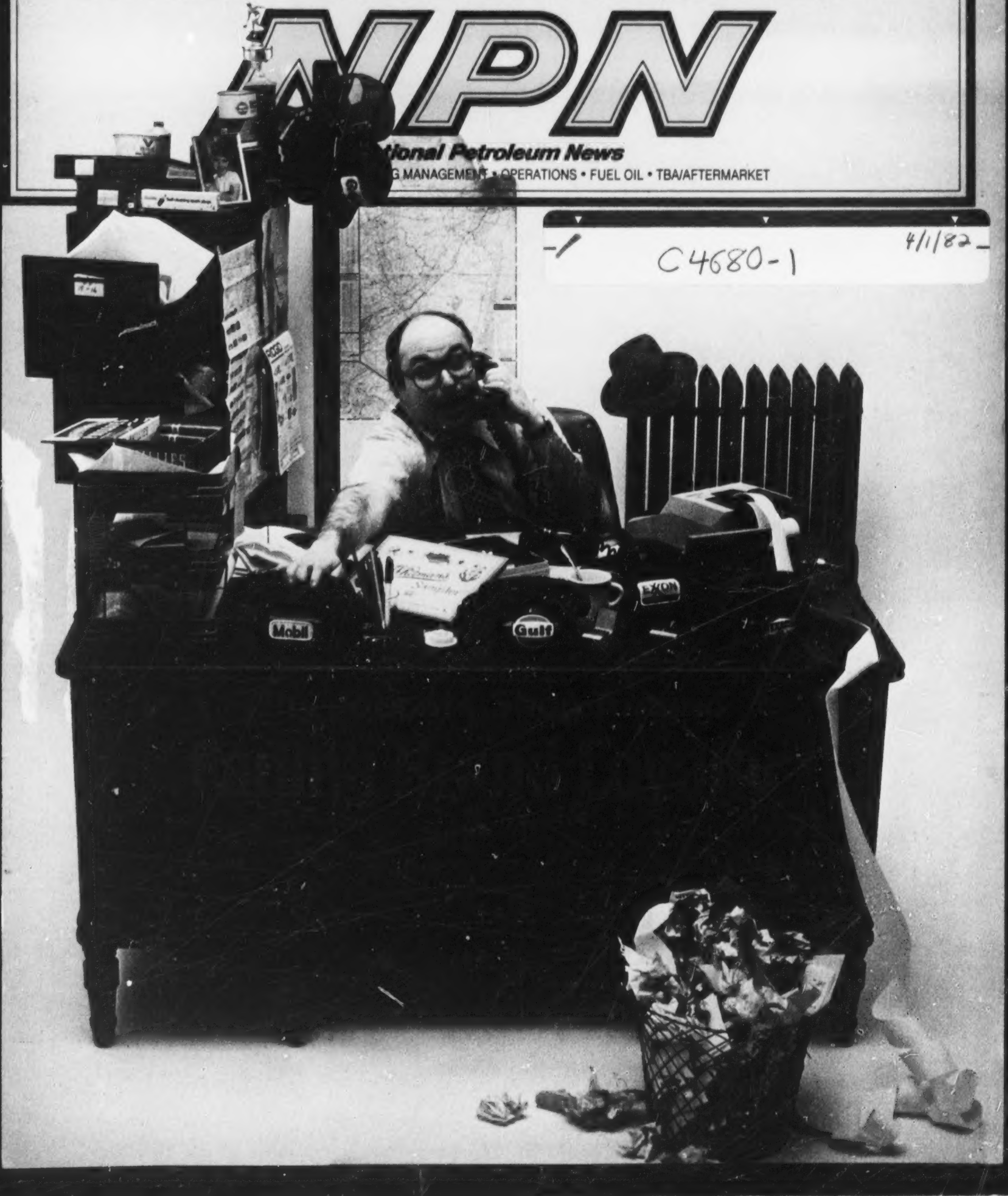

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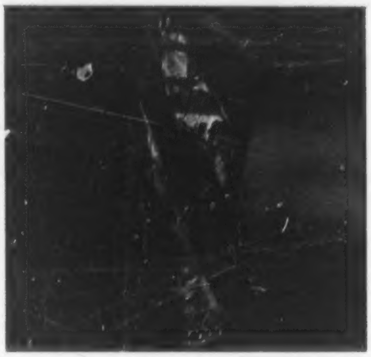
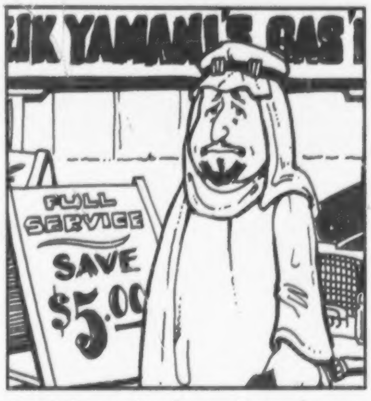


The frantic and almost desperate scramble by jobbers to buy product cheap enough to compete with rock-bottom retail postings is causing a breakdown in traditional branded supplier-jobber relations. Nowadays, a branded distributor may fly more than one flag and have a dozen or more sources of supply. Page 40.

**Cover photo by Eric J. Barrick.**



One dollar a gallon for regular grade gasoline by Memorial Day, and perhaps the same for unleaded gasoline by Fourth of July. This is what is in prospect for the markets as crude oil surpluses shave prices all over the Middle East, Europe and Latin America. Page 27.

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Some jobbers are having success and others recently have been "shaken up" by trades in the oil futures market. As one says, "It is a dangerous market if you don't know what you're doing, but the oil business is dangerous if you don't know what you're doing also." Page 44.

# • TRENDS

## No Hazy Intentions in Reagan's EPA Planning

**If it wasn't clear before, there is little doubt anymore that the Reagan administration means to have a much leaner Environmental Protection Agency (EPA) next year.**

In his latest budget request to Congress—covering the 1983 fiscal year that begins in October—President Reagan has proposed to cut EPA spending by as much as 29% over 1981 levels and phase out as many as 2,700 workers, 24% of the current staff.

It's likely that Congress won't go along with cuts as drastic as the White House is seeking. No Republican wants to face the 1982 elections with those kinds of numbers to explain. But what is often overlooked when the budget fights are raging is that whether the cuts are approved as is, or lessened by Congress, they signal the administration's *intentions* better than anything else.

Coupled with public statements by EPA Administrator Anne M. Gorsuch and her top aides, the budget request gives a clear message to the petroleum marketing industry: only the biggest, most dangerous pollution problems will receive EPA attention.

Translated in terms of one of the industry's pressing interests involving EPA—vapor recovery—the administration's message might be read: "So long as the distribution terminal isn't huge, and emission levels aren't way out of line, don't worry, we've bigger fish to fry."

According to Mike Scanlon, a National Oil Jobbers Council VP and former EPA staffer, the so-called Stage I vapor recovery program probably will remain as is. The Stage II program, however, "just isn't going to happen now," he says. In fact, EPA may significantly ease the ozone standard in many areas and thus the need for stringent vapor recovery programs. And, it appears the administration and EPA will be lenient in granting five-year extensions to states for meeting ozone standards, the deadline for which is this year.

That's good news for marketers, who otherwise would face some large expenses under Stage II requirements. The cost of installing necessary hardware could run $12,000 to $20,000 with maintenance as high as $300 a year for each dispenser involved.

Administrator Gorsuch, who ranks only behind Interior Secretary James Watt on the environmentalists' "least liked" list, recently received an angry letter from Rep. Toby Moffett (D-Conn.) after the lawmaker learned that Gorsuch told a small refiner she would use "prosecutorial discretion" if the refiner exceeded lead content standards for gasoline. Because the standards were being reconsidered, Gorsuch said, EPA wouldn't be bothering with them.

EPA spokesman Byron Nelson was later quoted to the effect that "we won't put people out of business who aren't major polluters."

The controversy over lead content is just one area where EPA appears ready to give the industry a break. In a recent speech to a California oil group, Gorsuch and top aides assured the industry that EPA is ready for a "truce" with producers and refiners.

On the issue of toxic substances, which include—or once included—petroleum products ranging from gasoline to petrochemicals, EPA also is pulling back. Donald Clay, the top EPA officer for that area, says budget constraints have forced his office to "narrow its focus" to the minimum required by law. Instead of 2,300 substances, EPA's list of toxic products—those the agency will monitor closely—will be cut back to 250.

While the budget cuts, whatever they finally turn out to be, are cutting staff and financial resources, Congress, especially in the past couple of years, has been asking the agency to do more. Last year alone, lawmakers ordered EPA to administer the "superfund" toxic waste dump clean-up effort and toughened its role in controlling hazardous chemicals (which aren't the same as toxic substances in all cases). In other times, the new jobs would have been cause enough for sizable staff increases.

If it all sounds like welcome news for jobbers who have feared that the cost of meeting EPA's standards might leave just enough cash to hire a good bankruptcy lawyer, there is a dark side that also must be considered.

"What it means," said one top EPA official, "is that we can't police every potential source of pollution. The rules won't be so hard and fast, but while we'll bend a little, we still have the authority and the obligation to execute the laws passed by Congress. We're not going to ignore the law."

For jobbers, that is bound to create some uncertainty and that's just the way EPA wants it. To be safe, those who can do so will meet the agency's deadlines and standards. Those who do not are taking a risk. It will be some time before the extent of that risk is known. —**Tom Goldsmith**

# • MARKETPLACE AT A GLANCE

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| JANUARY | Gasoline (All types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| U.S. City Avg. | $1.341 | $1.285 | $1.358 | $1.456 |
| Regions: | | | | |
| Northeast | 1.369 | 1.318 | 1.374 | NA |
| North Central | 1.322 | 1.279 | 1.344 | 1.411 |
| South | 1.316 | 1.257 | 1.332 | NA |
| West | 1.384 | 1.311 | 1.405 | 1.472 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 2/26/82 | 2/27/81 |
|---|---|---|
| Gasoline (total) | 255,779 | 280,870 |
| Gasoline (unleaded*) | 100,136 | 99,910 |
| Kerosine ** | 39,746 | 41,698 |
| Distillates | 144,780 | 171,143 |
| Residual | 64,273 | 80,275 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

# MAY

# 1982

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## Will Arco's Card Move Ignite New Street Fights?

## Florida Jobber's Strategy for Buying Out Others

## How Experts Convert Small Stations to C-Stores

# NPN

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## Bob Morrison

## New-Breed Independent

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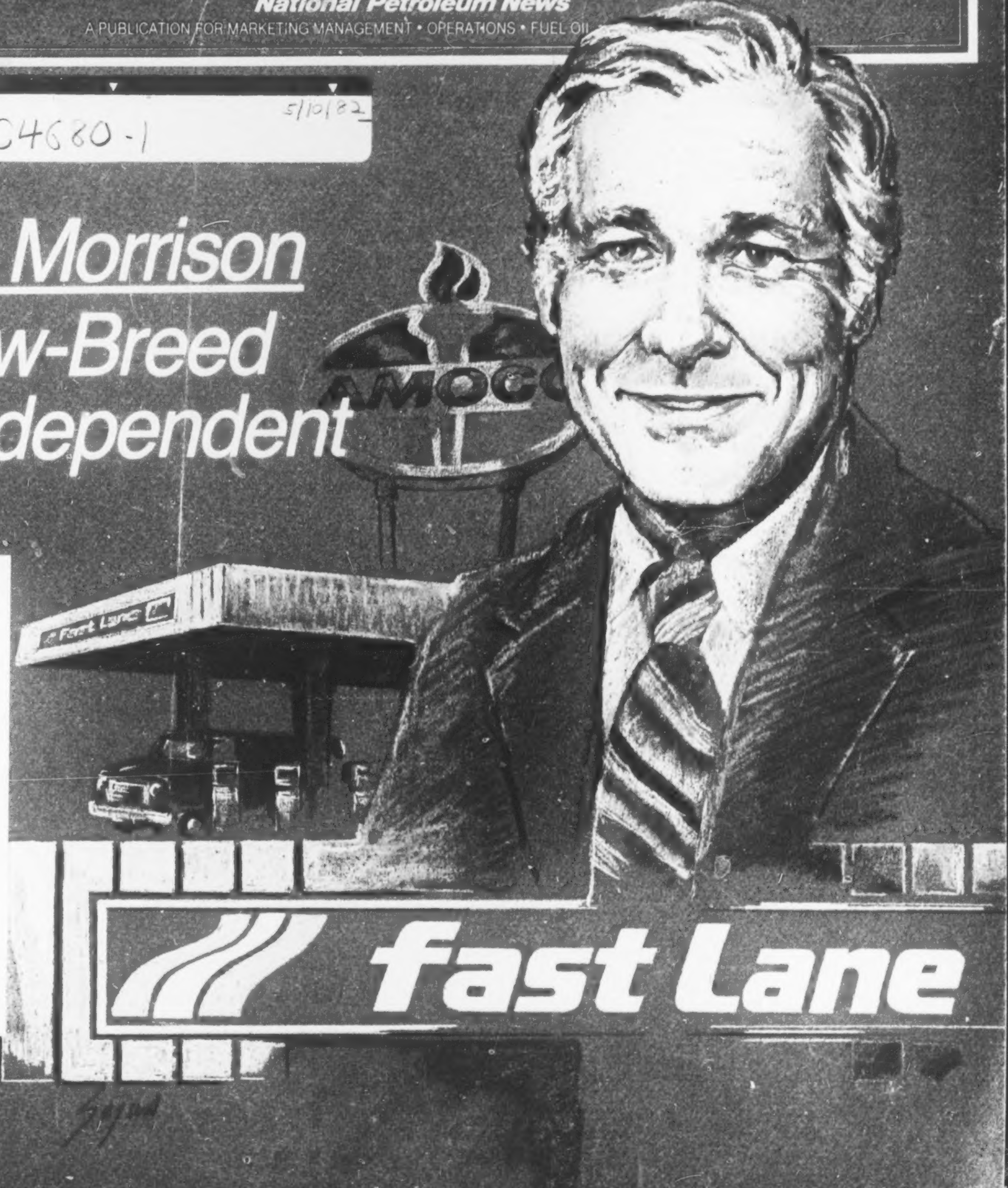

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A new type of independent private-brand oil marketer is emerging from the often turbulent marketplace of the 1980s—one-time branded jobbers who are developing their own brands. One fast-rising newcomer among this current crop of rookie-indies is R. R. (Bob) Morrison, Jr., of Vicksburg, Miss. Page 40.

**Cover illustration by John Sejud.**

Atlantic Richfield appears to be assuming a new role in the U.S. gasoline market, doffing the cloak of a major and donning the garb of a "superindependent." With elimination of its credit card, other majors are falling all over themselves for Arco's business and figuring new slants for their own card programs. Pages 18 and 31.

Their numbers are dwindling, but there are isolated pockets where tiny jobbers still can make it in oil marketing. Take Joel Strohl, for example, and Pretty Prairie, Kans. Page 48.

# • LATE NEWS

## Small Refiners Face Grim Prospects in Coming Months

**The fallout of older, less efficient refineries could increase dramatically over the next few months, perhaps causing a supply crisis for private-brand independents, some industry sources believe.**

Some authorities say that as many as 50 small or older refineries were closed last year following decontrol. The American Petroleum Institute reports 805,715 b/d of capacity had been closed permanently by Dec. 31, 1981. Since then, announcements of refineries for sale have substantially increased.

Large, expensive modernization projects at the big refineries are nearing completion now, which will enable them to process heavier, high-sulfur grades of crude. They will have a raw material cost advantage over refineries which must operate on more expensive light, low-sulfur oil.

Standard Oil of California, for example, expects to complete a $1-billion modernization program at its Pascagoula, Miss., refinery next year. Currently, the company's refineries can run on about 58% heavy crude. When the Pascagoula project is completed, this ratio will increase to 72%.

Cost spreads can range as wide as $4 to $6 bbl. between top-quality light crudes and the heavier grades.

"The refiner who has to operate mostly on light, sweet crude is in for a hell of a time," says a veteran executive. "You are going to see a real shakeout unless something drastic happens to alter the present trend."

There already are indications that some refiners are having a tough time. Hudson Refining Co.'s 19,500 b/d plant in Cushing, Okla., reportedly went down for a routine maintenance "turnaround" in early January and was still down in mid-April. Texaco, meanwhile, is finding little interest in its plants in Casper, Wyo., and Tulsa, Okla.

"The last thing I would want today is a refinery," says a source who has been offered Texaco's Tulsa facility. "I don't need an anchor around my neck."

## Supply/Price Firming Trend Considered Temporary 'Blip'

**The recent firming of supply and prices in spot markets is probably just a "blip," say some marketers who usually are accurate in forecasting market ups and downs. They don't rule out the possibility, however, that markets could show more strength in the next few months.**

Supply suddenly tightened in early April in spot trading at the Texas Gulf Coast and prices jumped several pennies.

"I don't see any changes in what caused the supply glut," says one veteran. "I can see nothing that says we won't have plenty of gasoline. And if we have lots of supply, street prices will remain tough. We won't see retails much over $1 in Texas and $1.10 across the nation for the next several months."

Some sources believe major suppliers, heavy losers in market share the past few months, may have their inventories in better shape now and are ready to slug it out with the independents and unbranded racks.

By mid-April, jobbers in some areas were reporting major brand buying prices below the unbranded racks. In Memphis, Tenn., for example, Shell's jobber price on April 12 reportedly was 81.65¢ for leaded regular while most other majors there were posting 83.25¢. The lowest unbranded rack price in this market at the time was 86.5¢.

Tightening of spot market supplies coincided, to some extent, with the ending of many major company rebate programs in March. Texaco's rebates had been so large that some of its jobbers were able to resell product to non-Texaco marketers at prices lower than such customers could get it elsewhere. With its rebate program ended, spot market trading on Texaco product slowed in early April and lent additional strength to rising Gulf Coast spot prices.

## 1981 Demand Up in 11 States

**Despite the overall decline in gasoline consumption in 1981, 11 states and the District of Columbia recorded increased demand during the 12-month period, according to Federal Highway Administration.**

The 1981 roundup showed these states with increases: Alaska, Arizona, Florida, Mississippi, Nevada, New York, North Dakota, Oklahoma, Texas, Utah and Wyoming. The largest increases were those in Alaska (5.7%), Oklahoma (4.2%) and Utah (4.6%).

| | | Add 000 gal. | | |
|---|---|---|---|---|
| | 1981 Rank | 1981 (a) | 1980 (b) | % Chng. '81 vs. '80 |
| Alabama | 23 | 1,849,225 | 1,961,902 | −5.7% |
| Alaska | 50 | 212,804 | 201,373 | 5.7 |
| Arizona | 28 | 1,344,438 | 1,328,722 | 1.2 |
| Arkansas | 33 | 1,137,998 | 1,178,800 | −3.5 |
| California | 1 | 10,842,862 | 10,992,050 | −1.4 |
| Colorado | 26 | 1,503,658 | 1,506,415 | −0.2 |
| Connecticut | 29 | 1,296,048 | 1,327,582 | −2.4 |
| Delaware | 48 | 290,581 | 293,851 | −1.1 |
| District of Columbia | 51 | 177,658 | 171,451 | 0.7 |
| Florida | 4 | 4,845,057 | 4,810,520 | 0.7 |
| Georgia | 11 | 2,809,969 | 2,874,923 | −2.3 |
| Hawaii | 47 | 347,848 | 354,529 | −1.9 |
| Idaho | 40 | 471,054 | 488,333 | −3.5 |
| Illinois | 6 | 4,598,012 | 4,816,780 | −4.5 |
| Indiana | 12 | 2,605,584 | 2,686,146 | −3.0 |
| Iowa | 27 | 1,474,733 | 1,561,192 | −5.5 |
| Kansas | 31 | 1,268,708 | 1,311,181 | −3.2 |
| Kentucky | 24 | 1,729,135 | 1,755,397 | −1.5 |
| Louisiana | 18 | 2,006,034 | 2,081,328 | −3.6 |
| Maine | 39 | 497,749 | 517,014 | −3.7 |
| Maryland | 21 | 1,914,423 | 1,941,209 | −1.1 |
| Massachusetts | 16 | 2,249,956 | 2,301,675 | −2.2 |
| Michigan | 8 | 4,014,363 | 4,274,036 | −6.1 |
| Minnesota | 19 | 1,984,982 | 2,045,270 | −2.9 |
| Mississippi | 32 | 1,208,384 | 1,194,845 | 1.1 |
| Missouri | 14 | 2,528,616 | 2,602,627 | −2.8 |
| Montana | 41 | 445,641 | 459,950 | −3.1 |
| Nebraska | 35 | 798,018 | 847,341 | −5.8 |
| Nevada | 38 | 508,535 | 500,286 | 1.6 |
| New Hampshire | 46 | 358,962 | 411,214 | −3.0 |
| New Jersey | 9 | 3,150,798 | 3,260,992 | −3.4 |
| New Mexico | 37 | 742,486 | 743,334 | −0.1 |
| New York | 3 | 5,674,946 | 5,668,563 | 0.1 |
| North Carolina | 10 | 2,874,700 | 2,932,274 | −2.0 |
| North Dakota | 43 | 408,449 | 407,250 | 0.3 |
| Ohio | 5 | 4,766,658 | 4,982,574 | −4.3 |
| Oklahoma | 20 | 1,922,403 | 1,845,259 | 4.2 |
| Oregon | 30 | 1,271,001 | 1,330,612 | −4.5 |
| Pennsylvania | 7 | 4,471,326 | 4,735,849 | −5.6 |
| Rhode Island | 45 | 368,524 | 381,826 | −3.5 |
| South Carolina | 25 | 1,529,196 | 1,562,400 | −2.1 |
| South Dakota | 42 | 411,024 | 423,517 | −2.9 |
| Tennessee | 15 | 2,388,466 | 2,417,939 | −1.2 |
| Texas | 2 | 8,149,406 | 8,106,499 | 0.5 |
| Utah | 36 | 768,450 | 734,992 | 4.6 |
| Vermont | 49 | 234,114 | 238,842 | −2.0 |
| Virginia | 13 | 2,530,673 | 2,599,199 | −2.6 |
| Washington | 22 | 1,872,364 | 1,882,513 | −0.5 |
| West Virginia | 34 | 804,632 | 845,242 | −4.8 |
| Wisconsin | 17 | 2,067,800 | 2,177,363 | −5.0 |
| Wyoming | 44 | 375,068 | 373,723 | 0.3 |
| **U.S. Total** | | **104,143,151** | **106,448,704** | **−2.2%** |

Includes consumption on highway, off-highway and other uses.
(a) Preliminary; (b) Revised and final.

# • TRENDS

## Highway System Is Oil's Marketplace and Nemesis

**Future supply trends and questions they pose for oil marketing strategy could become moot in view of the nation's sagging commitment to highway maintenance and capital spending. Trends in the latter sector are on a course that could relegate the country's motor fuel needs to the family lawn mower in years to come.**

Deteriorating highway systems and devalued funding formulas are focusing debate on issues of vital "pocketbook" concern to the oil marketing fraternity. Pressures for "highway user" and motor fuel tax increases are mounting at federal, state and municipal levels, with marketers generally resisting them as inimical to their own sales programs. However, the highway problem is shaping up as an oil market dilemma of the "pay me now, or pay me later" variety. The costly options, according to expert testimony, appear to be equally undesirable and inescapable.

The urgency of the situation is made plain in a bottleneck of policy confusion at the federal level. Warned Transportation Secretary Drew Lewis at recent congressional hearings, "We're going to see a geometric deterioration of our transportation system if we don't obtain additional funding." His statement followed by weeks President Reagan's tentative consideration and dismissal of a 4¢ or 5¢ increase in the federal gasoline tax, opting instead to transfer the existing 4¢ tax and its programs to the states. Now, however, Lewis is back in the halls of Congress appealing for a nickel increase. And the idea, rejected just months ago, is picking up steam in the administration [see page 36].

Some of the data that transportation officials and Congress have been exposed to lately should be alarming to the oil industry. Its big-ticket refined products, gasoline and diesel fuel, are directly at stake because of the implications for motoring and highway use.

A comprehensive study recently released by General Motors Research Laboratories (GMR) indicates starkly how conditions on interstate, arterial and collector highway systems (1.1-million miles of roadway) have declined since 1975 because maintenance funding has lagged needed levels of spending. It is the first research to establish a technical basis—"a discrete time, discrete state Markov chain model"—for estimating current and future highway conditions and the level of spending required to preserve and restore the systems.

In 1981, according to GMR, capital improvements costing $40.1-billion would have been required to restore all highway systems to 1975 conditions; $14.5-billion would have been needed just to preserve 1980 conditions. Actual 1981 capital improvement spending was in the neighborhood of only $7.5-billion. If current expenditure trends continue through 1985, says GMR, it will then cost $119-billion (about one-sixth the annual U.S. budget) to restore highways to 1975 levels.

The gap, based on current levels of funding by all governments, is getting wider due to inflation and real highway cost increases on the one hand, and declining tax revenues caused by higher auto fuel economy, less travel and mounting alcohol-fuel tax exemptions on the other. By 1985, predicts GMR, expected highway spending of $8.1-billion will represent just 30% of the funds required to improve 26,000 miles of roadway that year.

Already, though, such projections may be outmoded because the states have been acting fast in the past 18 months to cut this gap. A record for such legislation was set last year when 22 states enacted gasoline and other motor fuel tax increases [NPN—Feb. p29]. So far in 1982, bills to raise motor fuel taxes have been introduced in 18 states, six of which passed similar measures in 1981, according to the Highway Users Federation.

All of the increases in these various state taxes are the biggest thorn in the side of oil marketers who must pass them along to customers and suffer any resulting volume declines. But with the worsening financial potholes in highway budgets at every level, those who advocate higher motor fuel excise taxes to bridge the gap are gaining influence, and not just outside the industry.

"This nation's roads are a most important part of our economic health," says one small California refiner. "The 'highway user taxes' are one of the few taxes where the public actually has the tax dollars spent in a designated area, and you really can measure the return versus the outlay."

A case can be made that one measure of health of future motor fuel markets will be the state of the nation's highway system. The industry may want to give greater weight to the long-term returns on investment that gasoline taxes represent before balking too stridently at increases in current outlays. "You can't have a first class economy," says a Highway Users Federation executive, "with a second class road system."

**—Ron Landry**

# • MARKETPLACE AT A GLANCE

**AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)**

| FEBRUARY | Gasoline (All types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| **U.S. City Avg.** | $1.318 | $1.260 | $1.334 | $1.438 |
| **Regions:** | | | | |
| **Northeast** | 1.350 | 1.396 | 1.356 | NA |
| **North Central** | 1.301 | 1.258 | 1.321 | 1.399 |
| **South** | 1.292 | 1.233 | 1.309 | NA |
| **West** | 1.353 | 1.276 | 1.374 | 1.451 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

**STOCKS (Add 000 bbl.)**

| | 3/26/82 | 3/27/81 |
|---|---|---|
| **Gasoline (total)** | 250,362 | 283,206 |
| **Gasoline (unleaded*)** | 97,841 | 100,536 |
| **Kerosine **** | 43,870 | 43,862 |
| **Distillates** | 128,599 | 163,767 |
| **Residual** | 58,091 | 78,457 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

# Ashland Proclaims Gasohol Alive and Well

**Far from being dead as an industry and forgotten as a product, gasohol is not only alive and well but on a revived binge, according to Dan C. Greer, vice president of Kentucky independent Ashland Oil.**

Addressing the National Petroleum Refiners Assn. meeting in San Antonio, Tex., in mid-March, Greer made this up-and-at-'em comment:

"Press reports predicting the demise of gasohol have been based on a misinterpretation of technology and market trends.

"Because the name 'gasohol' has largely been replaced by such terms as 'super unleaded with ethanol,' many recent reports have incorrectly linked the obsolescence of the name to that of the product.

"A second misconception is that poor market penetration of fuel ethanol in several states not offering alcohol tax incentives is evidence of widespread consumer dissatisfaction. Actually, fuel ethanol distributors have simply shifted marketing priorities toward the 19 states currently offering alcohol incentives with remarkable success."

The truth, said Greer, is that the ethanol industry is healthy and growing. He gave this summation:

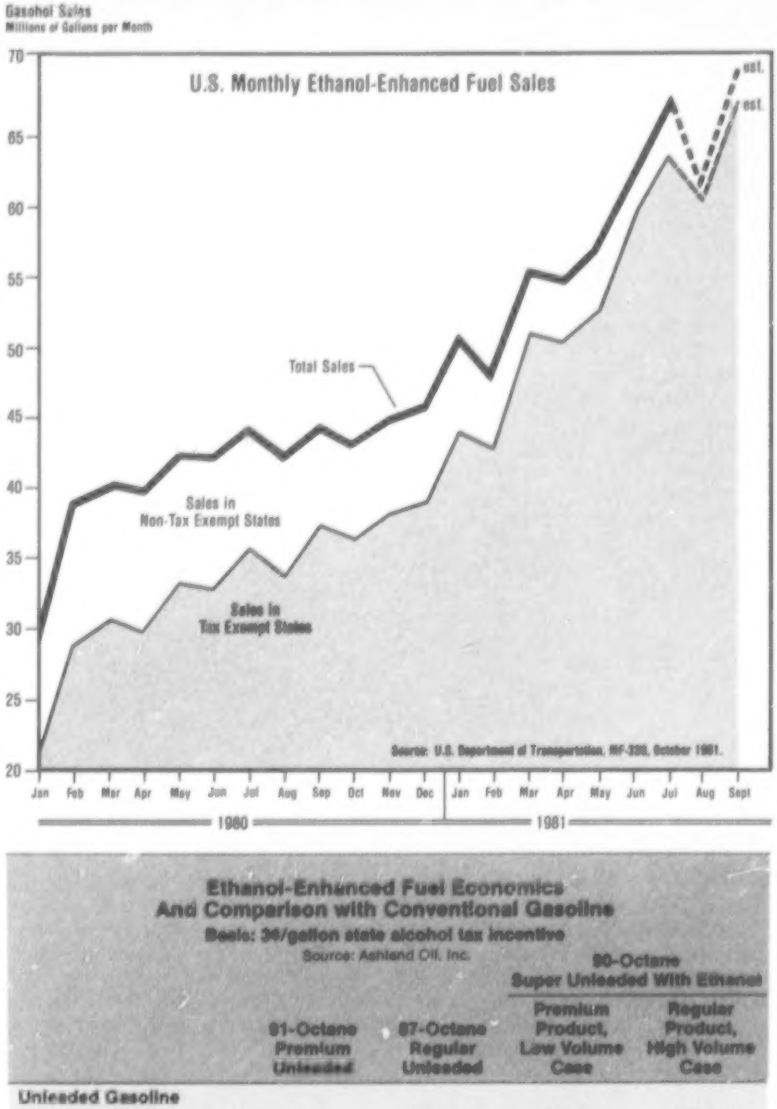
"The recent completion of 88-million gal. of capacity in the Midwest should increase ethanol-enhanced fuel sales dramatically. By 1983, it is expected that at least 328-million gal. of capacity, not including small producers, will be on-line.

"This amount represents a tripling of today's aggregate capacity and will ensure product availability and a competitive market. Other facilities which received initial government funding approval but have not started construction total 420-million gal.

"The current strength of fuel ethanol demand in conjunction with this growing supply promises to boost long-term price stability of corn [the major ethanol feedstock] relative to that of petroleum and is likely to improve ethanol's competitiveness in the future."

The Ashland executive discussed the role of his company in the ethanol world and came up with the following conclusions:

- When blended at terminals, ethanol produces a super unleaded grade which can improve retail margins and station volumes. Terminal blending is most feasible in states offering alcohol tax incentives.
- Ethanol has higher research and motor octane blending values than MTBE or toluene; hence, ethanol's value in the marketplace should approximate or exceed those of MTBE or toluene.



Source: U.S. Department of Transportation, MF-33E, October 1981.

**Ethanol-Enhanced Fuel Economics**
**And Comparison with Conventional Gasoline**
**Basis: 3¢/gallon state alcohol tax incentive**
Source: Ashland Oil, Inc.

| | 91-Octane Premium Unleaded | 87-Octane Regular Unleaded | 90-Octane Super Unleaded With Ethanol | |
|---|---|---|---|---|
| | | | Premium Product, Low Volume Case | Regular Product, High Volume Case |
| **Unleaded Gasoline** | | | | |
| **Regular @ 1.00¢/gal.** | — | 100¢/gal. | 90¢/gal. | 90¢/gal. |
| **Premium @ 1.04¢/gal.** | 104¢/gal. | — | — | — |
| **Ethanol @ 1.70¢/gal.** | — | — | 17¢/gal. | 17¢/gal. |
| **Price at Terminal, ex. tax** | 104¢/gal. | 100¢/gal. | 107¢/gal. | 107¢/gal. |
| **Federal Excise Tax** | 4¢/gal. | 4¢/gal. | 0 | 0 |
| **State Tax @ 10¢/gal.** | 10¢/gal. | 10¢/gal. | 7¢/gal. | 7¢/gal. |
| **Distributor Haul** | 1¢/gal. | 1¢/gal. | 1¢/gal. | 1¢/gal. |
| **Dealer Cost, inc. tax** | 119¢/gal. | 115¢/gal. | 115¢/gal. | 115¢/gal. |
| **Dealer Margin** | 10¢/gal. | 6¢/gal. | 9¢/gal. | 6¢/gal. |
| **Retail Price** | 129¢/gal. | 121¢/gal. | 124¢/gal. | 121¢/gal. |

Greer's analysis, presented to the refiner group with the data above, is in keeping with recent promotional statements by the big alcohol producers, chief among them Archer Daniels Midland (ADM). In its second quarter report to share-holders dated Feb. 26, ADM showed record sales for the period ending Dec. 31 with a 40% gain in volume over the previous quarter.

And, January-February sales were "significantly better than those reported on second quarter volume," according to ADM's marketing manager Edward Harjehausen.

Generating the increased alcohol sales is "the limited availability of refiner produced high octane fuels," concludes the alcohol producer.

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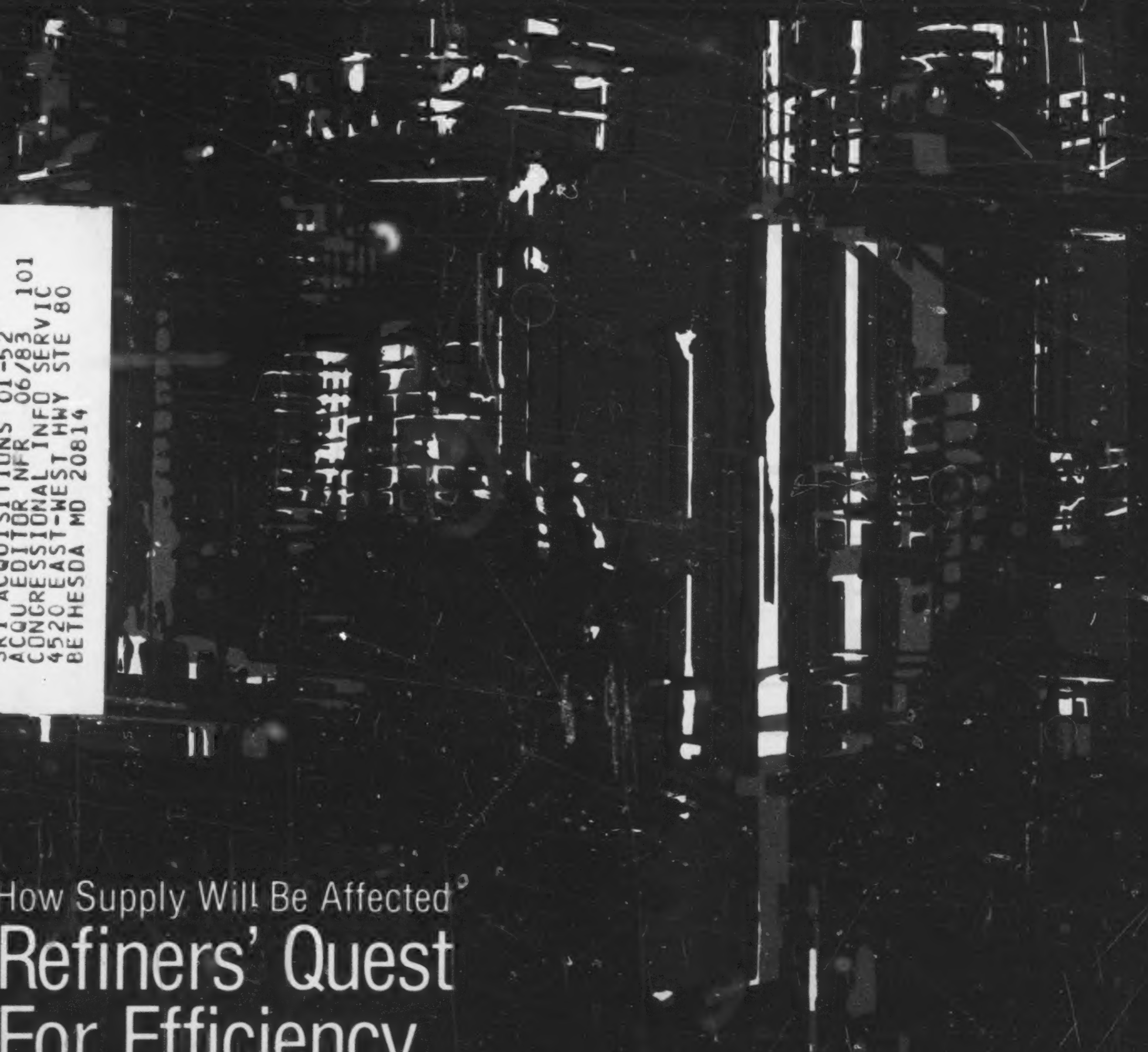
How Audits Save Money for Fuel Oil Dealers

Can You Profit from Quick Lube Tie-Ins?

Dealer Network Works for Denver-Area Jobber

# NPN



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How Supply Will Be Affected

## Refiners' Quest For Efficiency

# NATIONAL PETROLEUM NEWS

JUNE 1982 VOL. 74 NO. 6

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It's a complex study, but the domestic refining industry is going through perhaps the most unprecedented restructuring in its history. Refineries are being mothballed or scrapped completely, others are gearing up with huge investments in new technology. Oil marketers definitely will feel the tremors. Page 36.

**Cover illustration by Marcus Design.**

A firm that has been quietly watchdogging the interests of gas and electric utility customers for a half-century is now plying its craft in the fuel oil and gasoline businesses—with sometimes painful results for suppliers. Page 42.

Northern Tier Pipeline Co. had a hopeful plan for linking Midwest refiner-marketers to the West Coast and Alaskan North Slope crude oil. That plan disintegrated with a permit rejection in April by Washington state. Now, legal hale hits the Frostbelt. Page 18.

# • TRENDS

## If U.S. Doesn't Raise Taxes The States Will Be Forced To

**If the Reagan administration chooses not to do anything about hiking the federal gasoline tax this summer as has been talked about in Washington and elsewhere in recent months, watch for any number of states to have field days in the motor fuel revenue department.**

Many states are hurting because consumption has declined for the past several years and is cutting into their tax dollars for highway and bridge maintenance and new construction. The latest report from Federal Highway Administration shows that state gasoline tax collections, on a national basis, fell 2.7% in 1981. That's more than $3-billion, despite the fact that 22 states hiked their gasoline taxes by $2-billion or so last year [NPN—Feb. p29].

The outlook for 1982 is more of the same, i.e., still lower consumption and further slumps in motor fuel revenues. What makes all this doubly important is that motor fuel revenues represent as much as 10% or more of the total budgets in no less than 11 states. New Hampshire is highest, not only in cents per gallon (14.0¢) but also in the percentage ratio (18.0%). Eighteen other states are pretty close to the 10% of budget ratio, too.

In 1981, 40 of the 50 states (plus the District of Columbia) suffered declines in their motor fuel collections. In the preceding year, 34 states were down.

It has been particularly difficult for those states that switched from a flat cents per gallon to a variable percentage rate. This was all fine and dandy so long as pump prices and consumption were going up. But then the bottom fell out in 1981 and prices began to tumble.

What the federal government does about the federal tax is the key to 1982 and 1983. If the administration preempts the field and boosts the federal tax by as much as 5¢ gal., that would pretty well preclude state actions this year or next. After all, a 5¢ gal. tax hike will be a stiff one for motorists to absorb and it well could precipitate another sharp drop in consumption.

On the other hand, if the Reagan administration abandons the federal hike concept this year, watch for the states to move. This could be their last, best opportunity because, sooner or later, the federal tax is bound to be hiked. It hasn't been increased in 20 years or so. —**J. Richard Shaner**

### State Gasoline Tax Collections—1981

| | Gasoline Tax Rates per Gal. (12/31/81) (a) | Total State Motor Fuel Revenues in 1981 (Add 000) | % Change '81 vs. '80 |
|---|---|---|---|
| Alabama | 11.0¢ | $2,126,341 | −3.7% |
| Alaska | 8.0 | 180,049 | −0.7 |
| **Arizona (b)** | **8.0** | **1,446,963** | **−4.2** |
| Arkansas | 9.5 | 1,303,034 | −2.9 |
| California (c) | 7.0 | 11,330,390 | −4.8 |
| **Colorado** | **9.0** | **1,528,776** | **−2.9** |
| Connecticut | 11.0 | 1,327,964 | −4.2 |
| **Delaware** | **11.0** | **305,283** | **−3.8** |
| Dist. of Columbia | 11.0 | 175,291 | −4.4 |
| Florida | 8.0 | 4,838,540 | −5.4 |
| Georgia | 7.5 | 3,086,487 | −4.4 |
| Hawaii | 8.5 | 345,733 | 6.8 |
| **Idaho** | **11.5** | **504,578** | **1.4** |
| Illinois | 7.5 | 5,102,930 | 0.1 |
| **Indiana** | **10.5** | **3,054,646** | **−1.9** |
| **Iowa** | **13.0** | **1,714,616** | **3.4** |
| Kansas | 8.0 | 1,443,548 | 0.2 |
| Kentucky | 9.0 | 1,867,177 | −4.1 |
| Louisiana | 8.0 | 2,211,334 | −3.9 |
| Maine | 9.0 | 523,013 | −4.3 |
| Maryland | 9.0 | 1,957,794 | −4.3 |
| Massachusetts | 9.8 | 2,291,485 | −3.9 |
| Michigan | 11.0 | 4,108,255 | −6.5 |
| **Minnesota** | **13.0** | **2,139,238** | **−0.9** |
| Mississippi | 9.0 | 1,317,197 | −2.6 |
| Missouri | 7.0 | 2,763,325 | −1.2 |
| Montana | 9.0 | 523,232 | 1.6 |
| Nebraska | 13.6 | 950,508 | 5.8 |
| **Nevada** | **10.5** | **533,054** | **−3.1** |
| **New Hampshire** | **14.0** | **407,339** | **−4.5** |
| New Jersey | 8.0 | 3,348,705 | −2.6 |
| **New Mexico** | **9.0** | **843,962** | **−5.1** |
| New York | 8.0 | 5,569,766 | −2.2 |
| **North Carolina** | **12.5** | **3,086,132** | **−2.5** |
| North Dakota | 8.0 | 455,518 | 12.6 |
| **Ohio** | **10.3** | **5,368,283** | **−1.1** |
| Oklahoma | 6.5 | 2,013,945 | 1.8 |
| **Oregon** | **8.0** | **1,471,538** | **−2.9** |
| Pennsylvania | 11.0 | 5,070,441 | −4.7 |
| **Rhode Island** | **12.0** | **380,232** | **−0.3** |
| **South Carolina** | **13.0** | **1,674,770** | **−3.5** |
| **South Dakota** | **13.0** | **463,754** | **9.4** |
| **Tennessee** | **9.0** | **2,623,250** | **−3.3** |
| Texas | 5.0 | 8,735,415 | −1.0 |
| **Utah** | **11.0** | **788,209** | **2.6** |
| **Vermont** | **11.0** | **249,987** | **−3.8** |
| Virginia | 11.0 | 2,717,465 | −3.9 |
| **Washington** | **13.5** | **1,970,632** | **−3.1** |
| West Virginia | 10.5 | 903,712 | −5.1 |
| **Wisconsin** | **13.0** | **2,314,361** | **−1.7** |
| Wyoming | 8.0 | 434,071 | −0.2 |
| **Total U.S.** | | **$111,904,998** | **−2.7%** |

(a) Tax rate for highway use; does not include federal or local taxes; (b) Bold face indicates states which raised gasoline taxes in 1981; (c) California goes up 2¢ gal. on 1/1/83. Source: Federal Highway Administration, April 1982.

# • MARKETPLACE AT A GLANCE

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| MARCH | Gasoline (All types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| U.S. City Avg. | $1.268 | $1.206 | $1.284 | $1.407 |
| Regions: | | | | |
| Northeast | 1.299 | 1.241 | 1.304 | NA |
| North Central | 1.249 | 1.206 | 1.268 | 1.373 |
| South | 1.243 | 1.179 | 1.261 | NA |
| West | 1.303 | 1.221 | 1.418 | 1.418 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 4/27/82 | 4/28/81 |
|---|---|---|
| Gasoline (total) | 235,826 | 276,238 |
| Gasoline (unleaded*) | 92,979 | 99,797 |
| Kerosine ** | 46,439 | 47,282 |
| Distillates | 113,962 | 166,557 |
| Residual | 54,923 | 76,658 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

NPN

NATIONAL PETROLEUM NEWS JUNE, 1982

# Lundberg's 1981 Market Share Tally—Win: Amoco; Place: Shell; Show: Exxon

**Amoco displaced Exxon as the nation's No. 1 gasoline marketer in 1981, finally making it to the top after years of trailing the leaders by small margins, according to the *Lundberg Letter*, which keeps track of annual gallonage and marketplace positions.**

Amoco was third in 1980, thus making its vault into the leadership an impressive feat. Exxon, which ruled the roost in 1980 and 1979, dropped into third place. Shell held on tightly to the second position, after finishing No. 1 back in 1978 and 1977.

Amoco captured 7.31% of the national market in 1981, according to Lundberg. This was 39 points above Shell, at 6.92%, and 51 points above Exxon, at 6.80%. It was one of the widest spreads in recent years between the three top positions.

Shell, for example, won the 1978 derby by only one point—one one-hundredth of a percent. It was noted at the time that this was just about the equivalent of a good Saturday night's gasoline business for Shell across the nation.

According to Lundberg, the national gasoline market in 1981 was 2.53% smaller than that of 1980 which, in turn, was smaller than that of the preceding year. Lundberg's total market figures were not available, but Federal Highway Administration reported recently that gasoline volume in 1981 amounted to 104.1-billion gal., down 2.2% from the 1980 level of 106.4-billion gal. [NPN—May p10]. This squares fairly well with Lundberg's percentage.

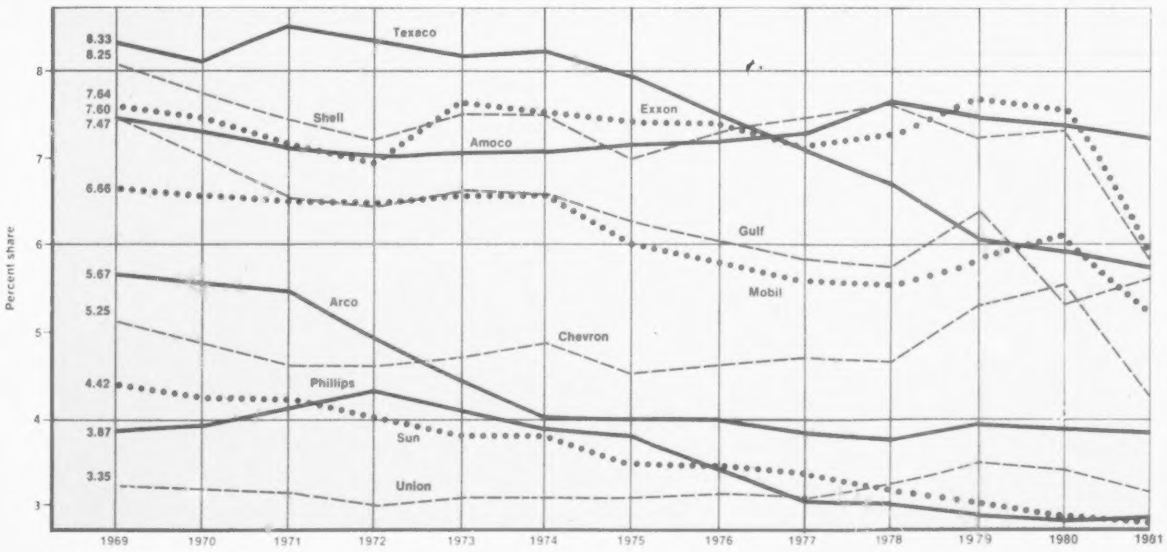
The all-time high for gasoline consumption occurred in 1978 when volume ran just a shade under 117-billion gal. Thus the 1981 usage was 12.5% below the peak year.

(continued)

## Top 11 Marketers: A Seven Year Overview

| | 1981 | | 1980 | | 1979 | | 1978 | | 1977 | | 1976 | | 1975 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Rank | % Share | Rank | % Share | Rank | % Share | Rank | % Share | Rank | % Share | Rank | % Share | Rank | % Share |
| Amoco | 1 | 7.31 | 3 | 7.40 | 2 | 7.48 | 2 | 7.71 | 2 | 7.30 | 4 | 7.20 | 2 | 7.17 |
| Shell | 2 | 6.92 | 2 | 7.44 | 3 | 7.30 | 1 | 7.70 | 1 | 7.53 | 3 | 7.36 | 4 | 7.00 |
| Exxon | 3 | 6.80 | 1 | 7.54 | 1 | 7.65 | 3 | 7.28 | 3 | 7.14 | 2 | 7.40 | 3 | 7.10 |
| Texaco | {4 | 5.70 | 5 | 5.95 | 5 | 6.01 | 4 | 6.75 | 4 | 7.11 | 1 | 7.50 | 1 | 7.94 |
| Gulf | 4} | 5.70 | 7 | 5.39 | 4 | 6.36 | 5 | 5.83 | 5 | 5.91 | 5 | 6.11 | 5 | 6.27 |
| Mobil | 6 | 5.33 | 4 | 6.01 | 6 | 5.78 | 6 | 5.55 | 6 | 5.59 | 6 | 5.78 | 6 | 6.02 |
| Chevron | 7 | 5.19 | 6 | 5.77 | 7 | 5.30 | 7 | 4.76 | 7 | 4.75 | 7 | 4.70 | 7 | 4.58 |
| Atlantic Richfield | 8 | 3.84 | 8 | 3.87 | 8 | 3.89 | 8 | 3.79 | 8 | 3.85 | 8 | 4.00 | 8 | 3.96 |
| Union | 9 | 3.33 | 9 | 3.50 | 9 | 3.49 | 9 | 3.28 | 11 | 3.08 | 11 | 3.24 | 11 | 3.18 |
| Phillips | 10 | 2.90 | 10 | 2.83 | 11 | 2.85 | 11 | 3.02 | 10 | 3.15 | 10 | 3.43 | 9 | 3.93 |
| Sun | 11 | 2.53 | 11 | 2.74 | 10 | 3.01 | 10 | 3.20 | 9 | 3.39 | 9 | 3.49 | 10 | 3.49 |

Source: Lundberg Letter and NPN Factbook.



*Taxable gasoline gallonage.

### Majors' Shrinking Share

An interesting aspect of the 1981 report was the obvious shrinkage not only in total gallonage but in the percentage held by the major oil companies.

In 1975, for example, no less than four companies each had at least 7% of the market. That held true in 1976 and 1977 but in 1978, the total dropped to only three companies with 7% or more. Again, this trend stabilized for two more years. But last year, only one company had a grasp on more than 7% of the market—Amoco.

Consequently, not only have the percentage figures fallen through the years but so have the gallonage volumes.

Shell, for example, had 7.71% of the national market in 1978—the peak year. That was roughly equivalent to 9-billion gal. In 1981, Amoco had 7.31% of a shrunken market and wound up with a much lower total—7.6-billion gal.

It should be noted here that the foregoing is a comparison of government and Lundberg statistics. So while the numbers may not be entirely accurate, they are in the ball park and close to home.

Another interesting facet of Lundberg's report on 1981 was the re-emergence of Gulf Oil as a contender for high honors. Gulf, in fifth place for years, jumped into fourth in 1979 and looked like a comer. It slumped in 1980 then came charging back in 1981. It pulled up virtually even with Texaco in co-sharing fourth place honors.

The uphill sledding will be a lot rougher for Gulf in the future because the competition in the win, place and show positions is extremely tough.

Be that as it may, Gulf seems sure to top Texaco in 1982. Texaco has been on a downhill slide for a decade. In 1971, it was the national leader with 8.33% share.

No other company in the annals of oil marketing statistics has reached that lofty peak. As a matter of fact, only Texaco and Shell ever topped the 8% mark, and that within the past 15 to 20 years.

## Depressing First Quarters For Most Oil Companies

**Although they didn't take a bath, in the vernacular of Wall Street, most oil companies did take a good watering down in their first quarter operations.**

**Just about everybody had minus signs in their profit and loss columns for the period ending March 30. The rare exceptions included Standard of Indiana, up 25%; Sun, up 3%; Diamond Shamrock, up 27%; Atlantic Richfield, up 4.7%; and Union, up 9.1%.**

**The minus signs reflected the depressed markets and the international oil surplus which, in any case, apparently was being whittled down to more manageable levels. This could presage better times ahead.**

**Revenues, as well as earnings, were hurt by the recession and reduced consumption. Exxon, for example, said its operating revenues were down 10.6% —the first time anything like this has happened since 1970, the most recent year for which records are readily available. The 22.5% decline in first quarter income contrasts dramatically with Exxon's average 20% annual growth rate since 1979.**

### 1982 First Quarter Oil Company Income

(Add 000)

| Company | 1st. Qtr. 1982 | 1st. Qtr. 1981 | % Change |
|---|---|---|---|
| Exxon | $1,240.0 | $1,600.0 | (22.5)% |
| Mobil | 326.0 | 640.0 | (49.1) |
| Texaco | 143.0 | 237.0 | (39.5) |
| Standard of Calif. | 230.0 | 666.0 | (65.5) |
| Standard of Indiana | 470.0 | 377.0 | 24.7 |
| Gulf | 267.0 | 303.0 | (11.9) |
| Shell | 345.0 | 361.0 | (4.4) |
| Atlantic Richfield | 385.4 | 368.2 | 4.7 |
| Standard of Ohio | 454.7 | 520.4 | (12.6) |
| Sun | 124.0 | 120.0 | 3.3 |
| Phillips | 189.0 | 270.8 | (30.2) |
| Getty | 164.0 | 230.0 | (28.7) |
| Union of Calif. | 168.5 | 154.5 | 9.1 |
| Amerada Hess | (16.2) | 174.5 | — |
| Cities Service | 53.0 | 57.7 | (8.1) |
| Tenneco (a) | 129.0 | 194.0 | (33.5) |
| Ashland (b) | (11.6) | 7.2 | — |
| Kerr-McGee | 29.2 | 43.3 | (32.6) |
| Diamond Shamrock | 64.7 | 51.1 | 26.6 |
| Murphy | 33.4 | 38.4 | (13.0) |
| American Petrofina | 16.0 | 20.3 | (21.2) |
| Total | 4.6 | (17.8) | — |
| Crown Central | (3.0) | (10.2) | — |
| Quaker State | 5.8 | 3.6 | 61.1 |
| Pennzoil | 40.0 | 60.2 | (33.3) |

---

(a) Corporate, includes Tenneco Oil; (b) 2nd quarter since fiscal ends 9/30; Ashland's six-month earnings were $35.9 in '82 versus $27.5 in '81 for an increase of 30.5%.

## Asset Positions of Top Oil Companies Improved Last Year

**All but one of the top 20-plus oil companies improved their asset positions in 1981, a compilation of data by *NPN* shows.**

Improvements ranged from 6% to 30%. But percentages tell only half the story, as statisticians and economists are well aware.

The only company to lose ground in 1981 was American Petrofina whose total assets declined 3.5% to $1.146-billion. [For the reason why, see NPN—June '81, p40.]

The assets of the biggest company, Exxon, rose 11.2% over 1980's aggregate of $56.68-billion and, all alone, constitute about one-sixth of the total assets controlled by the top 20 or so oil companies.

All of the companies in the following list are ranked according to their asset values. All have at least $1-billion in assets. This is the 1981 ranking by size:

| Company | Assets | % Change vs. 1980 |
|---|---|---|
| Exxon | $62,931.0 | 11.2% |
| Mobil | 34,776.0 | 6.3 |
| Texaco | 27,489.0 | 4.0 |
| Socal | 23,680.0 | 6.8 |
| Soind | 22,916.0 | 13.6 |
| Gulf | 20,429.0 | 9.6 |
| Shell | 20,118.0 | 14.2 |
| Atl. Rich. | 19,732.0 | 18.8 |
| Sohio | 15,743.0 | 30.3 |
| Sun | 11,822.0 | 7.9 |
| Phillips | 11,264.0 | 14.4 |
| Getty | 9,536.3 | 15.4 |
| Union | 7,592.8 | 12.1 |
| Amer. Hess | 6,321.6 | 7.2 |
| Cit. Serv. | 6,048.5 | 9.2 |
| Marathon | 5,993.6 | 18.9 |
| Ashland | 4,097.4 | 22.0 |
| Kerr-McGee | 3,414.9 | 21.7 |
| Dia. Shamrock | 3,016.3 | 26.9 |
| Murphy | 2,776.8 | 20.3 |
| Amer. Petrofina | 1,146.1 | −3.5 |

# Oil's TV Ad Spending Rises With Brand Competition

**Obviously reflecting the turmoil in the marketplace, the intensified pressure for gallonage and the effort to restore brand images, most oil companies increased their television advertising budgets significantly in 1981.**

A preliminary report from the Bureau of Television Advertising said oil companies spent more than $158-million on TV commercials last year. The budgets were about equally divided between spot TV and network TV.

Of the top 19 advertisers, only Atlantic Richfield cut its TV budget in 1981, unsurprisingly now in light of its recent move out of credit cards. It reduced expenditures by two-thirds, from a 1980 total of $14-million to a 1981 total of $4.7-million.

The table below gives the entire story:

## Oil's Top TV Advertisers—1981

(Add 000)

| Company | 1981 Total | Spot TV | % Chng. vs. '80 | Network TV | % Chng. vs. '80 |
|---|---|---|---|---|---|
| Exxon | $ 26,780 | $ 6,223 | 41.1% | $20,577 | 114.5% |
| Texaco | 15,761 | 3,746 | 114.5 | 12,016 | 3.3 |
| Shell | 13,561 | 7,416 | 108.4 | 6,145 | 19.6 |
| Stand. Oil (Ind.) | 11,630 | 11,630 | 43.9 | — | — |
| Phillips | 10,872 | 2,092 | 113.5 | 8,780 | 1.7 |
| Gulf | 9,829 | 9,624 | 50.7 | 205 | NA |
| Mobil | 8,993 | 8,993 | 173.3 | — | — |
| Stand. Oil (Calif.) | 8,745 | 8,518 | 53.3 | 227 | NA |
| Pennzoil | 8,355 | 2,522 | 170.9 | 5,833 | 1.2 |
| Conoco | 7,504 | 429 | NA | 7,075 | 38.5 |
| Sun | 7,166 | 1,799 | — | 5,367 | 164.5 |
| Ashland | 5,259 | 2,069 | NA | 3,190 | 2.1 |
| Quaker State | 5,122 | 2,054 | 34.8 | 3,068 | −1.3 |
| Atlantic Richfield | 4,693 | 746 | −77.4 | 3,946 | −66.3 |
| Union Oil of Calif. | 4,335 | 4,291 | 71.5 | 44 | NA |
| Getty | 3,202 | 3,202 | NA | — | NA |
| Burmah Oil | 2,856 | 2,856 | 28.5 | — | NA |
| Standard of Ohio | 2,621 | — | — | 2,621 | NA |
| Witco Chemical | 1,501 | 681 | NA | 820 | NA |
| **U.S. Total** | **$158,805** | **$81,513** | — | **$77,293** | — |

Source: Bureau of Television Advertising.

## U.S. Crude Oil Reserves Remain Stable; Natural Gas Potential Rises, Says USGS

**U.S. Geological Survey, in a fresh look at the crude oil and natural gas potential of the nation, says the picture hasn't changed much in the last seven to eight years.**

USGS says undiscovered but recoverable reserves of crude may range from a low of 64.3-billion bbl. to a high of 105.1-billion bbl.

This, the agency says, indicates the mean average is about 82.6-billion bbl., which is only slightly more than the 1975 mean average of 82-billion bbl.

Inasmuch as the American people are consuming about 6-billion bbl. of oil products a year, this could be taken to mean that the U.S. has undiscovered reserves of crude oil that might last 10 to 18 years. But, realistically, this is a meaningless figure because the U.S. imports great quantities of crude oil from other places in the world that have bountiful supplies.

The government agency does make the point though that there is a 95% chance that the minimum levels will be exceeded, but only a 5% chance that the maximum levels can be topped.

Natural gas resources are in better shape, however. The agency now says undiscovered but recoverable gas resources range from 474.6-trillion cubic feet to 739.6-trillion cubic feet. The mean estimate is 593.8-trillion cubic feet.

By way of comparison, the 1975 mean average was 484-trillion cubic feet, meaning that the gas resources have undergone an improvement of 22%.

USGS says there is a mean estimate of 18-billion bbl. of undiscovered natural gas liquids. Normally, these liquids are added to the crude oil supplies.

The geological report covers both the onshore and offshore potentials of the United States.

## Who Needs the Arco Credit Card?

**Although a Chicago-area Arco station had lost its company's credit card, it soon enough found a friend in Citgo.**

In late April, an Arco-branded jobber hoisted a banner at his station which proclaimed that motorists could use Citgo credit cards [see photo below]. The jobber declines to explain his marketing tactic, despite repeated attempts to contact him. Another company spokesman did say, however, that the station was not in the midst of rebranding to Citgo.

"The station can't turn in Citgo credit card slips and be reimbursed," says John Dewell, VP of retail marketing for Citgo. "But," he adds, "if somebody wanted to get around it, I imagine he could."

While the jobber is affiliated with a number of petroleum marketers in the area, none held Citgo supply contracts at presstime, another Citgo spokesman said.

Ironically, the "extra" credit feature had failed to boost sales beyond that station's regular 100,000-gal. a month volume, said a spokesman for the jobber. The station planned to begin honoring bank cards in May, he said, adding that the Citgo program "was just temporary."

"It's just like the bank cards," commented an Arco marketing spokesman. "If this guy has found a way to clear his Citgo card receipts, we don't care—we don't pay for [carrying] it." **NPN**

**Brand integrity is taking a beating in certain circles recently.**

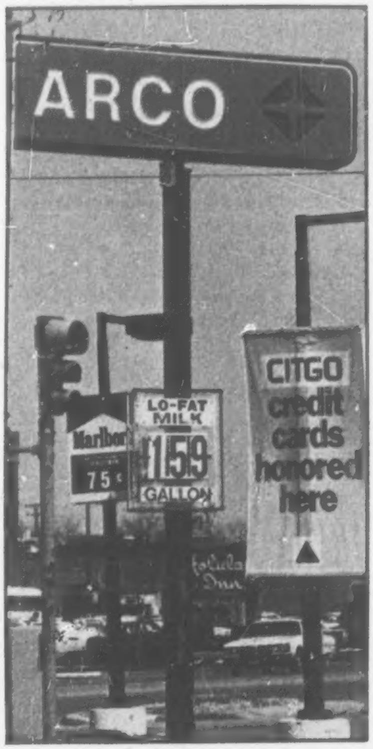


Photo by Tom Olson

7/1/82

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July, 1982 $4.00

## Bankruptcies Soar in the Big Market Shakeout

## Truman Arnold Proves Indies Can Outsell Majors

## Operations Experts Hype New Era of Automation

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How Non-Detection Can Cost You

# The Tank Leak Mess

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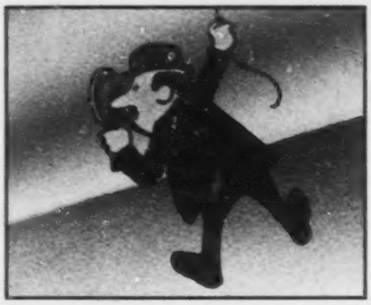

Somewhere in the U.S., an underground gasoline or fuel oil tank began leaking today. The same thing happened yesterday. It'll happen again tomorrow. Of most concern to marketers is the potential liability of tank leaks, which could put some firms out of business overnight. Page 36.

**Cover illustration by Bob Clarke.**

NO LEAD REGULAR

A unique supplier-jobber relationship involving Texaco, Conoco and Texas superjobber Truman Arnold is working like a charm for all parties concerned in the explosive Denver market. As a result, more majors could turn to more independents to do their marketing for them. Page 42.

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Uncertain supply conditions, a marketer cash flow squeeze and mounting bankruptcies force the conclusion that the much predicted post-decontrol 'shakeout' is here in earnest. The long-term implications are sobering. Page 25.

# • TRENDS

## Refineries Lose Sex Appeal For Indies; One Example Why

**There was a trend among large independent chain retailers to get into the refining business two or three years ago. Under federal controls at the time, it seemed the smart thing to do. Today, however, some find themselves ensnared in a costly trap and struggling to get out of it.**

Sigmor Corp., San Antonio, Tex., considered one of the industry's largest independents, is one such marketer.

Sigmor lost $14-million during this year's first quarter in its overall operations. Its refining operation, alone, lost $30-million. For the first nine months of its fiscal year ending June 30, the company posted a net loss of $5.6-million, the first in its history.

Tom E. Turner, Sigmor president, believes his company will show a profit in the quarter that ended June 30 when all the figures are in. Robert J. Boerner, treasurer, points out that "we wrote everything down to the bone" in the quarter ending March 31 because market conditions were so poor.

The losses through the company's third quarter, however, touched off a spate of apparently unfounded rumors that Diamond Shamrock Corp. might try to take it over. The latter, which supplies approximately 55% of the gasoline sold by Sigmor's 600 retail outlets, already holds 21.04% of Sigmor's stock. Diamond Shamrock also has recently expanded its credit line and talks of seeking acquisitions [NPN—June p11]. It has denied any plans to buy Sigmor, however.

It is unlikely that Diamond Shamrock or anyone else would succeed in an unfriendly takeover attempt of Sigmor. Turner and his wife personally hold about 58% of all outstanding stock and additional shares held by two sons push total family holdings to around 63%, says Boerner.

Sigmor purchased $448-million worth of products from Diamond Shamrock in the fiscal year ending June 30, 1981, and in turn sold back to it $86-million worth. So, the two already have a close working relationship.

Turner brushes off talk that Diamond Shamrock or anybody else might be trying to buy Sigmor. If a buyer were to show up "with a truck full of money, we'd talk to him, but first we'd have to measure the truck," he says.

Turner has been very frank with shareholders about Sigmor's struggles with its refinery, but he sees brighter days ahead.

Sigmor purchased a small refinery at Three Rivers, Tex., several years ago. The plant was closed at the time and was little more than a "topping" facility. It has been rebuilt at a huge cost into a modern refinery of about 65,000 b/d capacity. A fluid catalytic cracking complex, alone, was added at a cost of more than $100-million. Facilities have been expanded, also, to process over 20,000 b/d of "sour" crude. But while making all of these investments, the company has hit one roadblock after another in trying to work its way out of a crude oil supply trap.

The raw material supply problems began in the late 1970s when refiners were scurrying around both at home and abroad for connections. Turner made contact with Nigeria and entered into a contract at premium prices. This seemed to be the wise thing to do at the time because worldwide crude supplies were short and spot market prices were high. Small refiners back then also could afford to pay above-market prices for raw material because of benefits from the "entitlements" and "small-refiner bias" portions of federal controls.

But then the controls ended in January 1981, and the bottom fell out of both the crude oil and refined products markets. By the end of June 1981, Sigmor's refinery division posted a pre-tax loss of nearly $14-million. But this was just the beginning of its problems.

In November and December, the company began stockpiling feedstocks for the planned start-up of its new "cat cracker." This led to the accumulation of higher than normal levels of both crude oil and finished products, Turner has told shareholders.

Beginning in January 1982, crude oil prices began dropping sharply. What Sigmor had stockpiled dropped in value 15% to 20% during the next three months. Refined products began selling below the cost of crude. Sigmor's refinery was forced to process its accumulated high-priced inventories at a substantial loss.

Turner told Sigmor shareholders in May that things are looking up for the company's refinery operations. Crude oil prices were beginning to stabilize and refined product prices were rising. Indeed, by late May, Sigmor was able to hike its wholesale rack prices as much as 13¢ gal. over just a few days.

But while Sigmor may be working its way out of its refinery problems, such experiences are prompting the larger independents to avoid refinery purchases like the plague.

—Marvin Reid

# • MARKETPLACE AT A GLANCE

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| APRIL | Gasoline (All types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| U.S. City Avg. | $1.210 | $1.18 | $1.225 | $1.368 |
| Regions: | | | | |
| Northeast | 1.233 | 1.174 | 1.237 | NA |
| North Central | 1.195 | 1.152 | 1.213 | 1.323 |
| South | 1.174 | 1.107 | 1.191 | NA |
| West | 1.264 | 1.183 | 1.284 | 1.381 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 5/28/82 | 5/29/81 |
|---|---|---|
| Gasoline (total) | 212,947 | 257,804 |
| Gasoline (unleaded*) | 84,509 | 97,389 |
| Kerosine ** | 46,106 | 50,540 |
| Distillates | 109,976 | 164,599 |
| Residual | 54,248 | 77,987 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

## Oil Group Downgrades 1982 Demand Estimates

**Independent Petroleum Assn. of America (IPAA), in an updating of its 1982 forecast, believes domestic oil demand will decline about 600,000 b/d this year, about 3.7% below 1981 which in itself, was 1-million b/d down from 1980.**

The association's supply and demand committee, which met in May in Reno, Nev., blames the continuing slump on the "combined factors of a sluggish economy, the cumulative impact of previous large-scale price increases, and displacement by alternative fuels."

The committee says domestic demand will average 15.4-million b/d in 1982. This is significantly below the more optimistic projection it made last fall when it suggested that demand would average 15.9-million b/d.

Here are some of the highlights of the revised forecast:

- **Motor gasoline**, down 2.1% in 1982 to about 6.45-million b/d. The committee says demand is expected to strengthen in the third and fourth quarters, after a very weak first quarter, but that diesel penetration and increased efficiency will keep consumption below last year's level."
- **Middle distillate,** off 3.6% to an average of 2.85-million b/d, in the wake of a drop of nearly 5.4% in 1981. "Despite the severe weather in the Midwest and East [last winter], continued conservation and substitution by other fuels will result in lower heating oil demand which will more than offset gains in diesel fuel consumption," the report says.
- **Residual fuel oil**, down 140,000 b/d to an average of 1.92 million b/d, or 6.8% less than 1981. Says the committee: "Most of the reduction in residual fuel oil demand will be the result of coal and nuclear power substitution in the electric utility sector."

Other projections also are negative for 1982. But, there should be no problems with supply this year, IPAA states, "in the light of product demand declines."

The study says motor fuel stocks are expected to hover around the 233-million-bbl. level during the summer and autumn months and may decline to around 230-million bbl. later this year.

In the same vein, distillate stocks, now at a low point of less than 135-million bbl., are expected to increase to 185-million bbl. in the third quarter and to 189-million bbl. in the fourth quarter. This is extremely low inventory for fuel oil which normally has in excess of 200-million bbl. on tap as winter weather settles in.

This could presage some tight supply times next December-January if prolonged and/or bitter cold weather should grip the East and Midwest.

# Most Companies Suffered Product Sales Losses in '81

**Only two companies weathered the storm in 1981 to sell more petroleum products over the 12-month period than they did the year before—Tenneco and Diamond Shamrock.**

All of the others suffered losses in product sales ranging from 1% to 14%.

Product sales involve gasoline, distillates, kerosine, resids and other refined items.

Tenneco, with an average of 142,000 b/d of product sales, reported a 12.7% increase in 1981 over 1980. Diamond Shamrock, with a volume of 84,000 b/d, also was on the plus side with a 1.2% gain.

As befits the No. 1 oil company, Exxon continued to be the leader in total product sales, averaging 1,295,000 b/d. But Exxon also came within a hair, percentagewise, of sustaining the biggest decline in volumes last year vis-à-vis 1980. It was down 13.8%. Only Ashland's percentage drop was greater—14.1%. But Exxon's plunge averaged 208,000 b/d while Ashland's equaled no more than 70,000 b/d.

The deluge of minus signs confirmed what everyone took for granted in 1981—that consumption of gasoline, distillates, resids and other products fell sharply during the year. The accompanying table gives a rundown of product sales volumes, as gleaned from the annual reports of the top 22 companies, i.e., those with $1-billion or more in assets.

### 1981 Oil Company Product Sales

(Add 000 b/d)

| Company | 1981 | 1980 | % Change |
|---|---|---|---|
| Exxon | 1,295 | 1,503 | (13.8%) |
| Standard of Calif. | 1,141 | 1,255 | (9.1) |
| Texaco | 901 | 980 | (8.1) |
| Standard of Indiana | 831 | 957 | (13.2) |
| Shell | 826 | 922 | (10.4) |
| Mobil | 696 | 797 | (12.7) |
| Gulf | 691 | 737 | (6.2) |
| Atlantic Richfield | 648 | 703 | (7.8) |
| Amerada Hess | 515 | 550 | (6.4) |
| Sun | 477 | 544 | (12.3) |
| Marathon | 458 | 464 | (1.3) |
| Phillips | 446 | 460 | (3.0) |
| Ashland | 428 | 498 | (14.1) |
| Standard of Ohio | 378 | 415 | (8.9) |
| Union | 365 | 422 | (13.5) |
| Getty | 286 | 289 | (1.0) |
| Cities Service | 249 | 271 | (8.1) |
| Kerr-McGee | 150 | 168 | (10.7) |
| Tenneco | 142 | 126 | 12.7 |
| American Petrofina | 121 | 138 | (12.3) |
| Murphy | 91 | 92 | (1.1) |
| Diamond Shamrock | 84 | 83 | 1.2 |

# Many Issues Sidetracked by Budget Battle and Elections

**A sticky budget battle and the coming November elections have put Congress in a scheduling bind that could leave several pieces of legislation important to the petroleum marketing industry languishing until next year.**

At stake are pending bills such as the one sponsored by Rep. Frank Annunzio (D-Ill.) which would outlaw refiner credit card surcharges; the ill-fated divorcement legislation; Clean Air Act amendments; a measure to get the Northern Tier Pipeline under construction, and even the White House-backed Energy Department dismantlement bill.

"It's going to be an uphill struggle to get any but the most pressing bills passed this year," one congressional aide said last month. "Anything that is the least bit controversial probably will be sidetracked. There just won't be much time for extended debate on anything but the budget bills and some appropriations measures."

The main culprit is the congressional schedule. With elections coming in No-

# Lead Issue Aired by EPA

**The Justice Department has come down on the side of U.S. refiner groups, saying the Environmental Protection Agency (EPA) should not continue exemptions to its lead phasedown rules for blenders and gasoline importers unless it does the same for small refiners.**

EPA presently is weighing the lead phasedown rules and faces a choice among three options. It can continue exemptions for small refiners, blenders and importers; tighten lead-content restrictions on refiners only, or tighten them for all three groups. Large refiners already are subject to the tougher half-gram per gal. standard on lead content.

In addition to the call for uniformity, Justice officials—in formal comments on the EPA rule—introduced a novel idea into the proceedings. After insuring that the rules apply equally to all groups, Justice said, EPA should consider a plan under which refiners could buy the right to add lead to gasoline. The plan would let EPA regulate the overall amount of lead in motor fuel by restricting the number of permits, and discourage lead use by forcing refiners to pay stiff fees.

While EPA officials acknowledged the Justice comments, they refused to comment on the Justice fee plan.

The newly-formed Gasoline Blenders and Terminal Operators Assn. already had testified before EPA that changes to members' "small refiner" status would seriously damage their business.

# Expensive by the Dozen

**No less than 12 oil company executives were listed among the nation's top 100 wage earners in 1981, according to *U.S. News & World Report*.**

Executive rankings and their earnings are compiled in the accompanying table.

Biggest moneymaker of all was David Tendler, co-chairman of Philbro, a worldwide marketer of minerals, metals, fuels and grains. He got $2,668,000 in 1981, of which more than half came in the form of bonuses.

The president of Philbro was No. 2 on the hit parade, netting $2,220,871 in 1981, almost half in bonus money.

No. 3 in the paycheck department was the chairman of Warner Communications who earned a paltry $350,000 in pay but picked up $1,604,000 in bonuses for a grand total of $1,954,136.

**What Oil Company Chiefs Took Home in 1981**

| Ranking | Executive | Salary | Bonus | Total |
|---|---|---|---|---|
| 6 | Rawleigh Warner, Jr., Chairman, Mobil | $590,786 | $887,000 | $1,447,786 |
| 7 | Clifton Garvin, Jr., Chairman, Exxon | 716,667 | 713,745 | 1,430,412 |
| 8 | Fred Hartley, Chairman, Union of California | 508,333 | 823,074 | 1,331,407 |
| 11 | William Tavoulareas, President, Mobil | 485,448 | 767,000 | 1,252,446 |
| 27 | H.C. Kauffmann, President, Exxon | 514,167 | 470,347 | 984,514 |
| 44 | J.F. Bookout, President, Shell | — | — | 857,916 |
| 54 | G.M. Keller, Chairman, Standard of California | 420,300 | 400,407 | 820,707 |
| 65 | J.E. Swearingen, Chairman, Standard Oil (Ind.) | 451,897 | 325,000 | 776,867 |
| 69 | J.R. Grey, President, Standard Oil of California | — | — | 759,991 |
| 72 | Robert Anderson, Chairman, Atlantic Richfield | — | — | 754,000 |
| 80 | Armand Hammer, Chairman, Occidental | — | — | 742,000 |
| 100 | J.L. Ketelsen, Chairman, Tenneco | — | — | 681,817 |

Source: U.S. News & World Report

## Oil Reserve 'Fill Rate' Takes on Significance

**The Strategic Petroleum Reserve has become the focus of a squabble between Congress and the White House that could have a serious effect on oil marketing should crude oil become tight.**

Late in May, the Senate passed legislation which orders the president to fill the reserve at the rate of 300,000 b/d, beginning in October. The bill passed after Senators voted 51-44 against an amendment that would have allowed the White House to fill the reserve more slowly in 1983—at 208,000 b/d.

At presstime, the House was working on a version of the same legislation that calls for the White House to fill the reserve at the rate of 200,000 b/d until the 500-million-bbl. level is reached, then increase the rate to 300,000 b/d until 750-million bbl. are in storage. The House plan also gives the president one year to come up with a stand-by plan for distributing oil from the reserve should an emergency require it.

Neither bill has won the endorsement of the White House. The 300,000 b/d fill rate will be expensive, administration officials warn, because the salt caverns used for the reserve won't be opened fast enough and some of the crude will have to be stored above ground temporarily. The Senate did give the administration a loophole to use, however: The fill rate is subject to available funding.

The allocation plan sought in the House bill also presents a likely snag. President Reagan has steadfastly refused, so far, to go along with any plan calling for government allocation of crude oil supplies.

## Demand Plunge Sending Tankers to Early Grave

**The recent international oil surplus is raising hob with the industry's seagoing tanker population, according to *The Wall Street Journal*.**

So many idle tankers are available that they're being scrapped by the dozens. The newspaper says at least 100 vessels are lying in European and Eastern ports probably awaiting similar fates, and long before their useful lives are over.

Quoted was an Exxon official who said "part of the reason for the scrappings is that people aren't optimistic about long-term demand." It was noted that Exxon recently sold five large tankers for scrap, apparently for just such a reason.

Sources estimate that oil tankers might fetch $3-million to $4-million for scrap but would cost $90-million to build.

Dramatizing the trend are reported figures which indicate that 35 large tankers were junked in the first four months of this year, compared with 38 for all of 1981.

## Fuel Oil Briefs

(continued from page 49)

improved additives have turned the tide. In 1981, the utilities consumed mainly coal additives."

The most important fuel additives may be classified into several major groups, says Kline: preburner additives; freeze control agents; dust control agents; fireside additives; flue gas conditioners, and cold-end acid neutralizers. Preburner formulations are used to (1) disperse sludge and emulsify water in fuel oil, (2) reduce oxidation, and (3) decrease corrosion, and thereby keep fuel strainers and heaters clean, says Kline.

In the fireside area, the burning of fuel oil or coal can adversely affect boiler system components; additives are useful in warding off soot, slag and corrosion which can block heat transfer, impede efficiency and possibly damage costly equipment.

Spearheading the demand for these specialty products, according to Kline, are these factors: government mandates such as the Clean Air Act, Natural Gas Policy Act, and the Power Plant and Industrial Fuel Use Act; the long-term availability and quality of fuels, and capital costs associated with alternate remedies.

## N.Y. Power Users Get On-Site Energy Boost

**New York State's Public Service Commission, in a decision that could become a benchmark for other states, has ordered electric utilities to accept onsite power generation as a fact of life and learn to accommodate it as well.**

The state says the utilities must provide supplemental power to the on-site units when needed, and to buy from them any surplus power they may have from time to time.

It opens the door for big utility customers to set up their own generation plants, using No. 2, diesel oil or natural gas as fuel sources.

It is a left-handed blessing for the total energy plant concepts which have long been promoted by the oil and gas industries.

What has inhibited these developments, to date, was the fact that in the event of equipment failure they had no access to outside power. The utilities either avoided such tie-ins or charged exceptionally high rates for emergency supplies.

The Public Service Commission order now makes it necessary for the utilities not only to provide service when needed but also to buy up the extra power that might be generated.

The basic order was directed against Consolidated Edison Co., which is the largest utility in the nation.

## Degree Days Show Last Winter Was Colder than Normal

**Degree day data confirm what just about everybody in the Midwest knew well last winter—that it was a lot colder there than the previous year and much colder, too, than the so-called "normal" temperature.**

The data show that it was 8.7% colder in the Great Lakes area than during the winter of 1980-81, and 10.3% colder than the climate normally expected for the September-May period.

There were several times in January and February that the thermometer plunged to 25 degrees below zero Farenheit in the Chicago area alone.

Nationwide, the weighted averages show it was 7% colder last winter than the year before, and 5.8% colder than "normal."

Here's a degree day summary of the winter season as compiled by *Platt's Oilgram* News Service from National Weather Service stations in 18 different locations:

### Degree Days: Sept. 1-May 1

| Regions | 1981-1982 | % Change '82 vs '81 | % Change vs Normal |
|---|---|---|---|
| **East Coast** | | | |
| Boston | 5,675 | 0.9% | 5.5% |
| New York | 4,900 | 1.8 | 3.8 |
| Philadelphia | 5,184 | 2.7 | 9.1 |
| Washington | 4,255 | 14.3 | 2.7 |
| Average | 5,004 | 4.3 | 5.4 |
| **Great Lakes** | | | |
| Buffalo | 6,894 | 7.4 | 5.8 |
| Chicago | 6,963 | 14.8 | 12.3 |
| Cleveland | 6,301 | 2.1 | 7.6 |
| Detroit | 6,906 | 10.7 | 15.8 |
| Average | 6,766 | 8.7 | 10.3 |
| **Midwest** | | | |
| Denver | 5,112 | 13.7 | 10.2 |
| Minneapolis | 8,073 | 15.6 | 1.9 |
| Omaha | 6,696 | 15.4 | 13.6 |
| St. Louis | 5,201 | 21.2 | 12.0 |
| Average | 6,271 | 16.3 | 3.8 |
| **West Coast** | | | |
| Average | 3,304 | 12.2 | −3.5 |
| **Southeast** | | | |
| Average | 3,149 | −1.3 | 4.1 |
| Simple Average for all Groups | 4,899 | 8.6 | 4.8 |
| Heating Oil Demand Indicator (*) | 5,231 | 7.0 | 5.8 |

---

(*)This is the average of each group's simple average but weighted to reflect each group's percentage of past home heating oil demand in the various cities.

## Europeans Begin Producing Efficient Burner Here

**Oertli American/ABC Sunray Corp. has opened a new 50,000-sq.-ft. manufacturing and headquarters facility in Commack (Long Island), N.Y. Production will be heavily weighted to a line of energy efficient oil and gas burners engineered in Switzerland by the Oertli Energy Group, the U.S. corporation's parent.**

The company plans to introduce to the U.S. space heating market a low combustion oil burner which Oertli officials claim is capable of firing at a rate of less than one-quarter of a gal. per hour. Most homes in the Northeast, the company points out, use burners with firing rates ranging between three-quarters of a gal. and two gal. per hour.

Prompting development of the low-firing-rate burner is more modern, energy efficient housing and construction. According to the company, the trend to energy efficiency and conservation is well advanced in Europe and high-cost energy "has always been a factor there."

Oertli American says its new burner is "designed for energy efficient structures with design heat losses below 50,000 btu/hr." and is suitable "for structures with design heating loads as low as 20,000 btu/hr." such as are now being built in Europe.

The company also says it plans to produce and install systems which rely on several heat sources in combination: passive solar, a heat pump and either fuel oil or gas. Such systems can be "programmed to use each heat source only under the circumstances when it is most efficient," say Oertli executives.

August, 1982

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## Fuel Stop Automation: Now Jobbers Are Selling It

## Why Farm Distributors Are Squeezed So Tightly

## Most Jobbers Still Handle TBA, New Study Shows

# NPN

Nati nal Petroleum News

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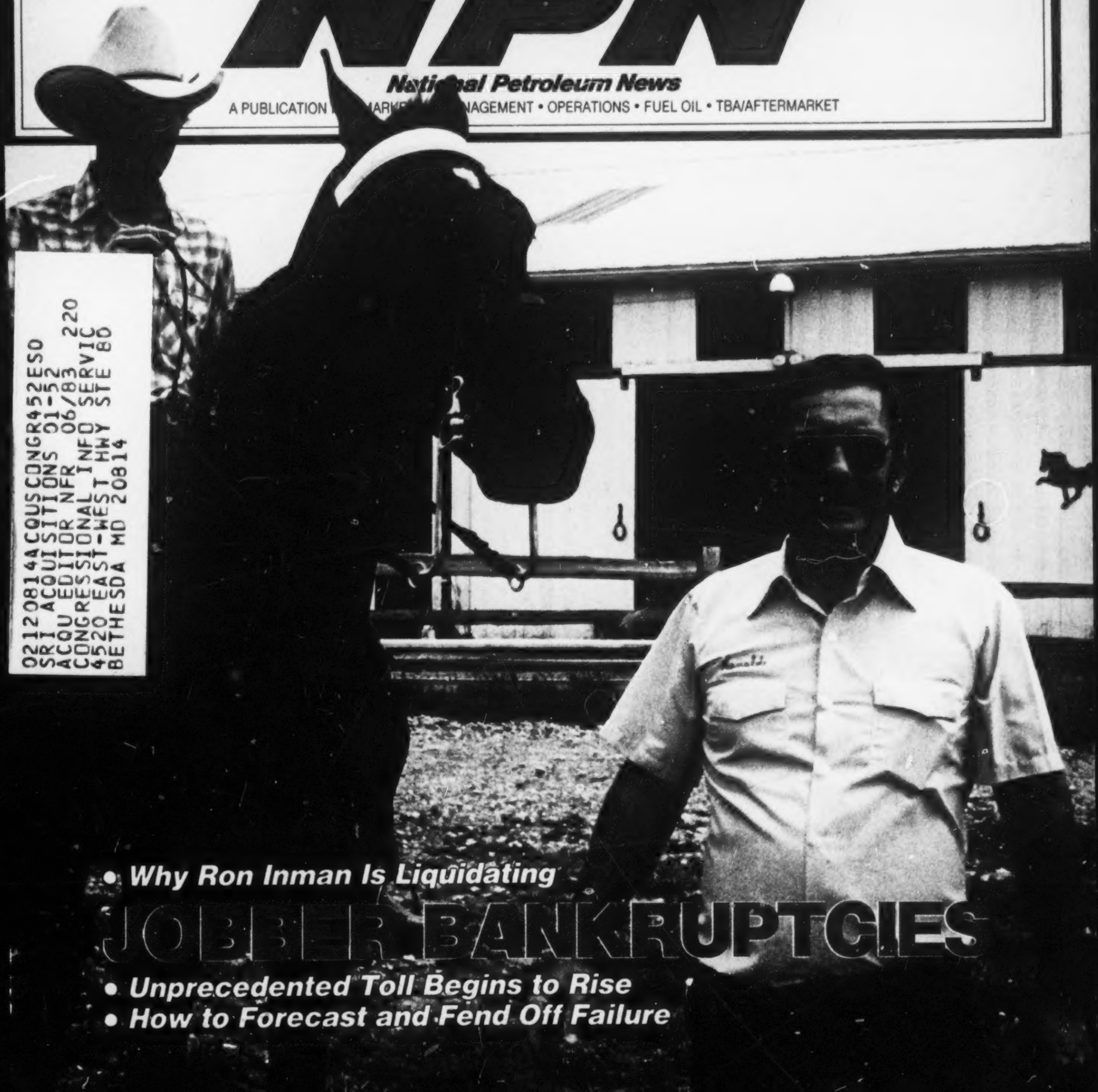

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- Why Ron Inman Is Liquidating

## JOBBER BANKRUPTCIES

- Unprecedented Toll Begins to Rise
- How to Forecast and Fend Off Failure

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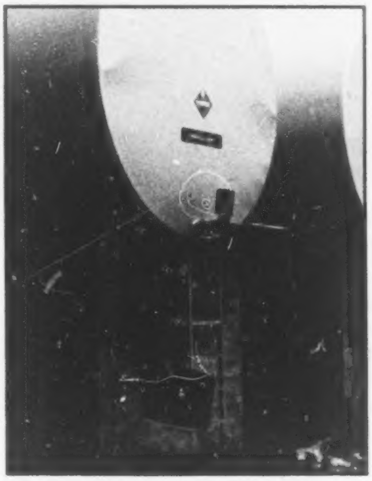
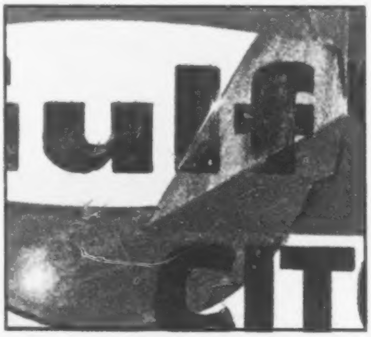
In an industry unaccustomed to such collapses, more and more oil jobbers are being swept up in the general bankruptcy epidemic. One marketer, Ron Inman, explains his move to liquidate in the face of imminent bankruptcy. A legal expert offers tips on how to read the signals of pending failure. Page 36.

**Cover photo by Thomas Olson.**



In the current upheaval, no one is squeezed so tightly as the oil marketer down on the farm. Stubborn rural economics are causing smaller, weaker jobberships, and their farm customers alike, to topple like a house of cards. Page 41.



The Cities Service takeover adds true heft to the refining and marketing arm of Gulf Oil. Efficiencies will have to be worked out, which could mean cutbacks and cutoffs to downstream marketers. Page 25.

# • TRENDS

## Equipment Distributors See Selectively Healthy Market

**Even though some gasoline marketers are hanging on by their fingernails and others are experiencing some sleepless nights, it would appear that not everything in many markets is all that bad or worrisome.**

One area that seems to be on the optimistic side is equipment distribution.

The authority for this is Howard Upton, executive vice president of Petroleum Equipment Institute (PEI), who reported in his membership newsletter in early summer that an informal poll indicated "business is not bad and looking better."

Most of the distributors he and an associate talked with during the spring months "appear generally optimistic about prospects for thier companies through 1982." Upton said about 100 different distributors were involved in the various conversations. He commented:

"Some of those confided only that their business was 'flat.' Far more typical were comments like these: 'We're holding our own . . . Our business is surprisingly good . . . We are being asked to quote on a lot of new installations.' "

Thus it would appear that reconstruction and expansion are still proceeding out there despite the gloom of statistics, which foresees further market retrenchment and continued decline in the service station population.

Where's the business coming from, Upton asked.

"Sales are somewhat uneven, from product line to product line, and from territory to territory," he said. "Tank vehicle sales remain soft. On the other hand, the market for canopies, lights and automated distributing systems appears to be good and gaining momentum.

"Distributors tell us they are selling automated systems to municipalities, fleet operators, school boards and similar organizations. Some distributors have even told us that automotive lift sales are beginning to pick up—that car dealers are starting to purchase lifts again."

The observation on automated equipment emphasizes anew the way the marketplace is moving to compensate for declining volumes while meeting customer demand for speedier service and convenience.

Upton also noted that there has been a re-emergence of major oil company buying in the equipment market. "In some far northern states," he said, "major oil companies are no longer a factor in the retail equipment market at all. They have sold off all, or most, of their retail properties. In the more populous areas on both coasts, however, major oil companies have re-emerged as principal purchasers of service station equipment. Some are engaged in rehab programs; others are building, or planning, new retail facilities. A number of distributors, who had given up calling on major oil companies in their areas, are re-establishing contact with them."

* * * * *

**Is diesel fuel generating new headaches?**

Another point the PEI executive brought up in a recent letter involves the accidental misfueling of diesel-powered passenger cars with gasoline. The prevalence of such fuel mixing isn't documented but there are potential and significant problems in combining the two. Gasoline and diesel engines have different compression and sparking ratios and a little gasoline in the diesel tank, or vice-versa, can bring on a lot of pings and pangs.

As suggested in Upton's newsletter, the growing popularity of diesel-engine vehicles may make it desirable for the oil and auto industries to compose a uniform dispensing standard which insures motorists cannot misfuel.

"Nozzle spout dimensions prevent leaded gasoline from being accidently dispensed into cars designed to operate on unleaded. However, there is no similar restriction to prevent accidental insertion of a gasoline nozzle, leaded or unleaded, into the fillpipe of a diesel vehicle.

"The problem has been studied by an [American Petroleum Institute] Engineering Committee task force and has been studied by various automotive industry committees. There are no simple solutions which will guarantee that misfueling will not occur. . . .

"The principal preventive measure is to provide that diesel fuel will be dispensed only from stand-alone pumps and not from two-product dispensers. Some oil companies have adopted policies which provide that diesel may be dispensed from the same island as gasoline, but only from single dispensers or dual one-product dispensers."

It was noted that some oil marketers also are using nozzle guards which have "diesel only" deep-stamped in the plastic. It's a problem that will have to be watched—lest a whole new set of regulations be visited on the industry in the form of special fillpipe, nozzle or dispenser-placement requirements that could become exceedingly expensive.

**—J. Richard Shaner**

# • MARKETPLACE AT A GLANCE

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| MAY | Gasoline (All types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| **U.S. City Avg.** | $1.224 | $1.166 | $1.237 | $1.379 |
| **Regions:** | | | | |
| **Northeast** | 1.233 | 1.165 | 1.227 | NA |
| **North Central** | 1.225 | 1.185 | 1.244 | 1.342 |
| **South** | 1.193 | 1.132 | 1.207 | NA |
| **West** | 1.271 | 1.192 | 1.287 | 1.392 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 6/25/82 | 6/26/81 |
|---|---|---|
| **Gasoline (total)** | 219,106 | 249,349 |
| **Gasoline (unleaded*)** | 87,418 | 94,632 |
| **Kerosine **** | 45,845 | 50,414 |
| **Distillates** | 124,053 | 176,400 |
| **Residual** | 57,397 | 77,341 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

# Sloppy Markets and Prices Limit C-Store Growth in '81

**For the second consecutive year, convenience stores sold more than $8-billion worth of gasoline in 1981. But the going obviously was just as tough for them as it was for their counterparts in conventional retailing.**

The 13th annual survey by *Convenience Store News* shows that the 1981 sales total of $8.3-billion was $200-million higher than the 1980 peak of $8.1-billion. Percentage-wise, this was an increase of only 5% compared with 1980's 55.8% growth and 1979's gargantuan leap of 92.6%. In 1977, the increase was a more modest 35%.

By contrast, the oil industry moved about $137-billion worth of gasoline in 1981. Thus, the C-store's role was about 6.7% of the national total.

The C-store business as a whole recorded total sales of $24.4-billion in 1981, an all-time high, according to the publication. But the crunch in gasoline prices had a sobering effect on what might otherwise have been a very impressive return, figures implied.

"The slowdown in the industry's growth rate in 1981 is largely attribatable to sharp decreases in gasoline prices," said the publication. "Where C-store operators sold $8.1-billion of gasoline in 1980, this important category only increased to $8.3-billion in 1981, a minuscule 2.5% boost. Since gasoline is sold by 45.8% of all convenience stores and accounts for one-third of total industry sales, its lackluster performance has a significant impact on the entire industry."

The survey shows that despite rising costs and record interest rates, more convenience stores were opened than closed in 1981. At year's end, the C-store population stood at 37,400 units, up 2.3% from the 36,576 in business on Dec. 31, 1980.

C-store customer count continued to rise in 1981, with a weekly average of 5,503 in 1981 versus 5,390 in 1980. The jump in customer count was softened somewhat by the addition of 824 new units during the year.

The survey also indicates that the average customer bought more in 1981 than in prior years.

Convenience store gross margins during 1981 averaged 29.8% for all categories excluding gasoline, down slightly from 1980's 30%. Total industry gross profit dollars, excluding gasoline, were approximately $4.9-billion.

The average C-store earned $130,134 in gross profit dollars last year, excluding gasoline. Including gasoline, the convenience store industry collected total gross profit dollars of $5.5-billion in 1981, compared with $5.0-billion the previous year. **N-V**

## C-Store Gasoline Sales: Still Rising But Much More Slowly

| | 1981 | 1980 | 1979 | 1978 | 1977 |
|---|---|---|---|---|---|
| Total Industry Sales Including Gasoline ($ billions) | $ 24.4 | $ 22.7 | $ 17.2 | $ 13.0 | $ 10.5 |
| Total Industry Sales Excluding Gasoline ($ billions) | $ 16.1 | $ 14.6 | $ 12.0 | $ 10.3 | $ 8.5 |
| Total Industry Sales Gasoline Only ($ billions) | $ 8.3 | $ 8.1 | $ 5.2 | $ 2.7 | $ 2.0 |
| Average Annual Sales Per Store Including Gasoline ($000) | $652.4 | $627.7 | $480.0 | $383.3 | $321.3 |
| Average Annual Sales Per Store Excluding Gasoline ($000) | $430.5 | $403.7 | $336.5 | $304.9 | $262.9 |
| Average Annual Sales Per Store Gasoline Only ($000) | $221.9 | $224.0 | $144.4 | $ 78.4 | $ 58.4 |
| Total Number of Stores | 37,400 | 36,576 | 35,750 | 33,904 | 32,200 |

Source: Convenience Store News, 1982 Industry Report.

## NACS Report Shows C-Store Gallonage Up, Average Margins Down

**National Assn. of Convenience Stores, in a preliminary report on its 1981 industry research findings, says gasoline margins continued to erode in the C-store business last year.**

The report indicates that the average margin dipped from 7.6¢ in 1980 to 5.9¢ in 1981. The peak year was 7.9¢ in 1980.

At that, however, the 1981 and 1980 margins are well above the averages of 1977 and 1978 which were 4.2¢ and 4.9¢ gal., respectively.

Fuel pumped by the average C-store rose from 36,000 gal. a month in 1980 to 36,500 gal. a month in 1981, an increase of 1.4%, the association says, adding rather dourly:

"After a string of years in which the industry consistently put together annual gains of 20% in gasoline sales, gallons sold have remained virtually flat for the past three years and are likely to remain so in the future."

The annual report also stated that "convenience stores are proving to be an attractive channel for the aggressive marketing of gasoline and oil products and we continue to see a trend toward gasoline operators moving into the sale of convenience store products rather than the other way around."

Two-thirds of all C-stores handling gasoline buy their supplies from oil jobbers, the report notes.

## NOJC Still Pushing For Stand-By Oil Allocation Rules

**The National Oil Jobbers Council and a few state jobber groups apparently haven't given up on the idea of stand-by allocation rules. NOJC senior vice president Robert Thornhill and other officials told House lawmakers in June that refiners already have put independent marketers in a "competitive Siberia" and warned the situation will get worse if supplies tighten.**

Before the House Subcommittee on Fossil and Synthetic Fuels, headed by Rep. Phil Sharp (D-Ind.), Thornhill said refiners have weakened jobber functional discounts, restricted jobber access to product and have begun pricing policies that favor refiner-owned stations over independents.

In calling for the stand-by allocation program, which Rep. Sharp championed in the House earlier this year, Thornhill said: "We are extremely concerned that [the Reagan administration] is placing 'blind faith' in the private sector's ability to maintain sufficient inventory to see this country through a shortage."

**TBA/AFTERMARKET**

# Most Jobbers Still Handle TBA Lines

**Six out of 10 gasoline jobbers handle one or more TBA lines in their routine operations, according to an *NPN*-Hunter Publishing Co. profile compiled earlier this year.**

But these sales vary regionally, the profile shows.

For example, only 37.8% of the surveyed jobbers in the Northeast handle TBA lines while well over half of all jobbers in every other region handle TBA. The numbers are 69.7% in the West, 64.6% in the North Central region and 59.9% in the South.

Somewhat surprisingly, according to the *NPN* study, the size of the jobbership (in terms of sales volume) has little influence on its likelihood of handling TBA items.

Of those who reported total sales under $3-million a year, 62.3% handle TBA lines. The percentage shows little change for those in the $3-million to $10-million category (63.3%), or in the $10-million and over a year group (64.9%).

Within the universe of jobbers who distribute TBA, there are approximately equal numbers of jobbers who report minimal involvement and those who report large TBA dollar volumes.

Some 32% report annual TBA sales of under $20,000 while 32.2% report sales of $100,000 a year and more. Another 6.5% said they have TBA sales in excess of $500,000 a year.

### TBA 8.5% of Sales

The *NPN*-Hunter profile shows that of the TBA-handling oil jobbers, TBA sales represent 8.5% of their dollar volume. There is little geographic variation in this figure, ranging regionally from 7.2% in the South to 10.1% in the North Central area.

There does, however, appear to be a correlation between the size of the jobber and the relative importance of his TBA sales to his "bottom line."

Those distributing TBA and who report annual sales of $3-million or less said their TBA lines represent 12% of total sales; the figure is 6% for TBA-handling jobbers with total sales in excess of $10-million.

Oil jobbers in the TBA business generally are optimistic about the future sales prospects.

Of the total, 8.1% predict considerable growth in their TBA sales over the next two years, while 32.3% of the responding jobbers anticipate "moderate" growth. Another 46.9% project sales will remain about the same and only 12.7%—about one in every 10—believe TBA sales will decline.

The *NPN*-Hunter profile also took a look at some of the items the TBA-handling jobbers carried, asking them for reports on 18 specific product lines.

### Antifreeze the Big Item

The most widely handled TBA product is antifreeze, which 56.2% of the jobbers said they handle as a routine.

In all, 11 of the 18 studied product lines are handled by at least 20% of all gasoline jobbers.

In descending order, these include: antifreeze, 56.2%; oil/air/fuel filters, 46%; batteries, 37.5%; sealed beam headlights, 27.2%; windshield wiper refills, 26.9%; additives, 26.8%; automotive lamps, 26.6%; belts, 26%; spark plugs, 24%; radiator hose, 22.5%; and thermostats, 20.6%.

*NPN*-Hunter used a special sampling list to reflect the industry as a whole, then used cash incentives and phone calls to achieve a 57.7% response level for questionnaires mailed earlier this year.

Compilation and interpretation of the data were handled by Great Lakes Marketing, Inc., an independent research organization. *NPN*-Hunter claims that "all information in this report is accurate within 3% to 5%, at a 95% level of confidence."

## Jobbers Handling Minimum One TBA Line

| Total Response | | Northeast | | North Central | | South | | West | |
|---|---|---|---|---|---|---|---|---|---|
| No. | % | No. | % | No. | % | No. | % | No. | % |
| 720 | 60.6 | 48 | 37.8 | 268 | 64.6 | 254 | 59.9 | 131 | 69.7 |

## Annual TBA Sales Volume
*(TBA Handling Jobbers)*

| Annual TBA Sales Volume | Number of Respondents | % of Respondents |
|---|---|---|
| $ 1,000-19,999 | 164 | 33.2% |
| 20,000-29,999 | 42 | 8.5 |
| 30,000-39,999 | 28 | 5.7 |
| 40,000-49,999 | 16 | 3.2 |
| 50,000-99,999 | 85 | 17.2 |
| 100,000-199,999 | 73 | 14.7 |
| 200,000-499,999 | 54 | 10.9 |
| 500,000 and Over | 32 | 6.5 |
| **Mean Average** | | **$258,349** |

## TBA Percentage of Total Sales

| TBA % of Total Jobber Sales | Number of Respondents | % of Respondents |
|---|---|---|
| 1% | 174 | 36.3% |
| 2 | 49 | 10.2 |
| 3 | 23 | 4.8 |
| 4 | 15 | 3.1 |
| 5 | 61 | 12.7 |
| 6 | 5 | 1.0 |
| 7 | 7 | 1.5 |
| 8 | 11 | 2.3 |
| 9 | 4 | .8 |
| 10 | 51 | 10.6 |
| Over 10 | 79 | 16.3 |
| **Mean Average** | | **8.5%** |

## Jobber TBA Customer Types

| Customer Type | Number of Respondents | % of Respondents (a) | % of TBA Sales Volume (b) |
|---|---|---|---|
| Service Stations Your Firm Owns & Operates | 318 | 61.0% | 34.1% |
| Service Stations Your Firm Owns & Leases | 226 | 43.4 | 17.4 |
| Other Service Stations | 240 | 46.1 | 17.2 |
| Repair Garages | 119 | 22.8 | 3.4 |
| Auto Parts Jobbers | 47 | 9.0 | 1.7 |
| Car/Truck Dealers | 61 | 11.7 | 1.2 |
| Retail Auto Parts Stores | 47 | 9.0 | 1.5 |
| Fleets | 109 | 20.9 | 4.2 |
| Farms | 162 | 31.1 | 9.5 |
| Marines | 17 | 3.3 | .2 |
| Other | 53 | 10.1 | 9.5 |

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(a) Column three refers to the numbers cited in column two.
(b) Column 4 refers exclusively to those who sell to the given customer type.
Source: NPN/Hunter Publishing Co., April, 1982.

September, 1982
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## Good & Bad of Convenience Store Franchising

## Can You Plug the Motor Oil Market Share Drain?

## How Commercial Sales Vaulted a Fuel Oil Dealer

# NPN

National Petroleum News

A PUBLICATION FOR MARKETING MANAGEMENT • TBA AFTERMARKET

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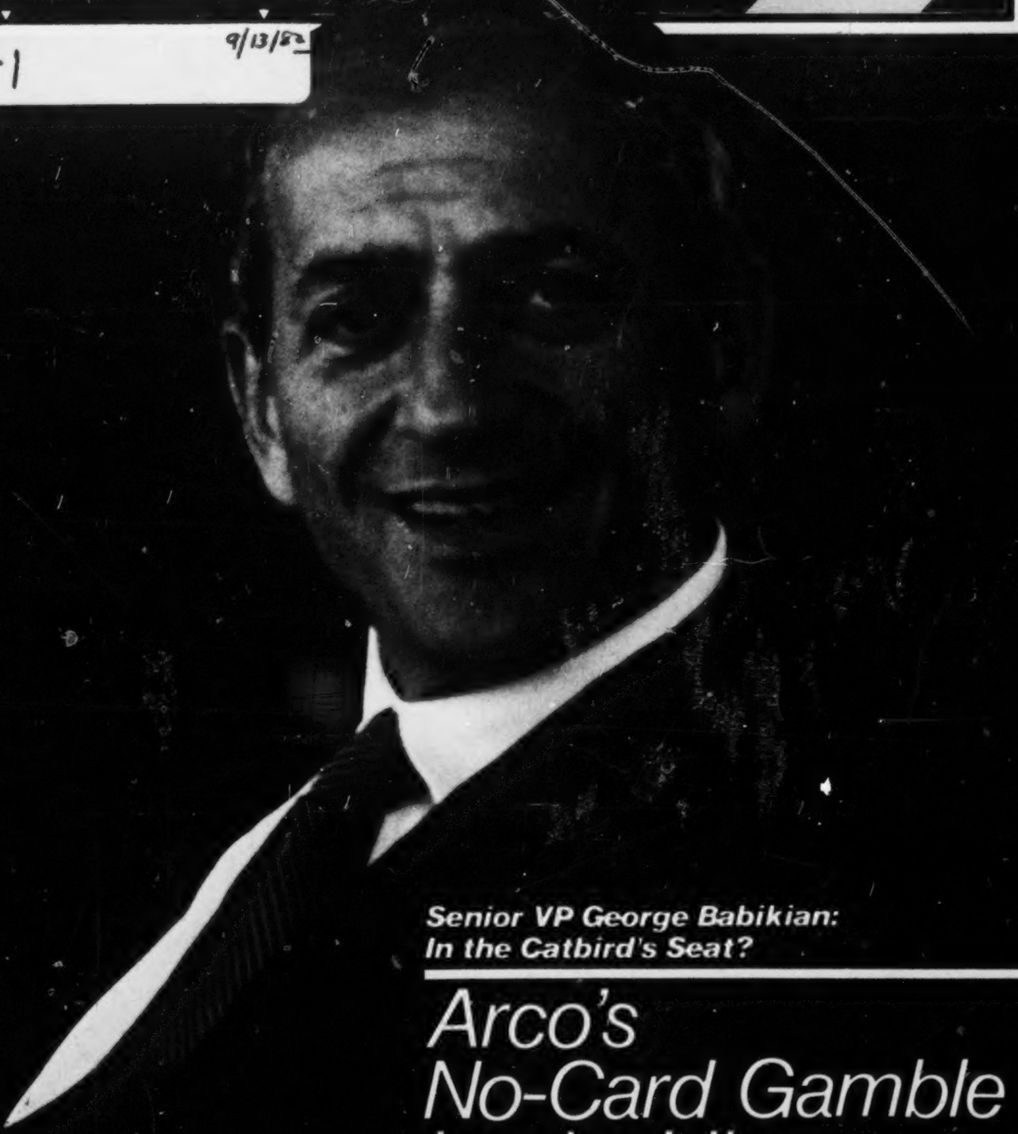

Senior VP George Babikian: In the Catbird's Seat?

## Arco's No-Card Gamble Looks Like A Winner

# NATIONAL PETROLEUM NEWS

SEPTEMBER 1982
VOL. 74 NO. 9

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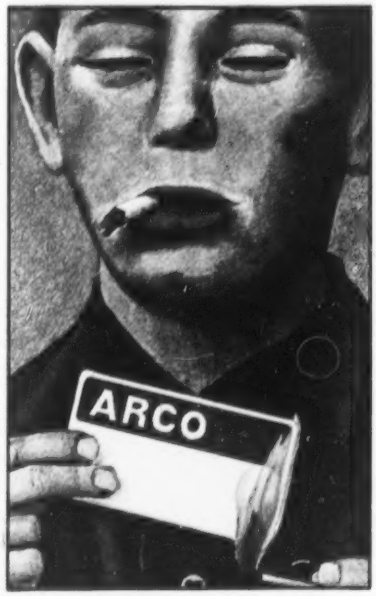
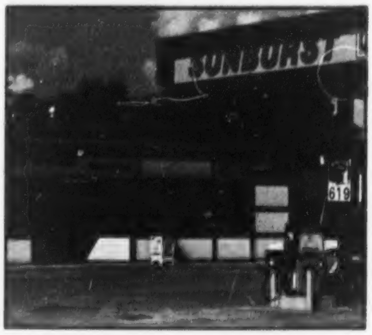


Has Atlantic Richfield—often viewed as one of the more daring, gutsy, innovative and even arrogant marketers among major oil companies—once again outsmarted its more timid and conservative brethren? The company has been chalking up truly impressive gains since dropping its credit card in April. Page 63.
**Cover photo by Marvin Reid.**



Jitney-Jungle, Inc., the convenience store franchisor based in Jackson, Miss., claims it has 'made a lot of franchisees rich' with its 336 Jr. Food Mart stores. One of the company's most successful franchisees responds, though not so glowingly. Page 70.

Seven out of 10 motor oil buyers prefer to 'do it themselves' than have their oil added or changed at the 'traditional' outlet. Mass merchandisers are still dominating a 550-million-gal. market. Page 74.

# • TRENDS

## Convenience Chains Bid For Auto Accessory Business

**In search of greater operating efficiency, oil marketers have been trimming the fat at their service stations—in many instances turning to self-serve, gasoline-only, pumper-type facilities. All but gone from such outlets are stocks and displays of automotive accessories, including motor oils, as many have found they could not compete with the discount, supermarket and warehouse-type operations handling these items.**

As quickly as the products have been eliminated by self-service gasoline retailers, however, they've been picked up and merchandised in the product mixes of the convenience store chains. Hand-in-hand with their large and growing involvement in gasoline marketing, the chains have added motor oils, additives, antifreeze, waxes, headlights and key chains to their grocery shelves. With their more diversified income base, the C-store chains have been able to meet the discount competition head-on.

A random survey of convenience chains, large and small, indicates that automotive accessory lines are a standard feature of their stores' product mix. Motor oils are the best sellers. "Selling gasoline," says one C-store chain spokesman, "creates a heightened awareness of the automotive accessory business. We're taking advantage of this opportunity to sell automotive supplies."

No company implies that overall inside sales have increased dramatically as a result of adding automotive product lines. But the rationale for carrying the items is consistent, with most companies saying they handle accessories as another "convenience" for customers.

Southland Corp., the giant of the convenience store industry with more than 7,000 7-Eleven stores and over 1-billion gal. in gasoline sales last year, looks on automotive accessories as just another assortment in its product mix. The chain has carried such items "for quite awhile," says a spokesman, with an average 2,400-sq.-ft. store devoting about four feet of display space to 25 or so different items. They're considered part of the company's nonfood category, which comprised 8% of Southland's $4.73-billion in total 1981 sales.

At the other end of the spectrum, another chain, Sigmor's Shopping Stations, recently taken over by Diamond Shamrock Corp., devotes 50% of floor space to automotive-related products. The stores, with average monthly sales of $30,000, range in size from 1,400 to 1,600 sq. ft. Sales of automotive accessories, according to the company's Jay Nelson, account for something less than 50% of total store sales.

Recently, the Houston-based National Convenience Store chain (NCS) has taken an aggressive turn in bolstering its share of the automotive accessory business. Corporate merchandising manager Jim Harkness says the company's gasoline sales account for 40% to 45% of total sales at its 965 Stop N Go stores. "About one out of every three persons who buys gasoline comes into the store and buys something else," he says. "That extra sale might be a snack or an automotive-related item."

Harkness says the company chose to trim space used for dry grocery items in order to make way for additional accessories. The stores, which average 2,650 sq. ft., now have at least eight to 12 display feet devoted to automotive items, up from four feet. The extra space has allowed the company to offer 90 different items, including 21 different motor oils. NCS's "Superstores," units ranging in size from 3,600 to 4,800 sq. ft., accommodate 36 to 48 feet of automotive display space.

Harkness says the greater space allotment has boosted sales of the items an average $1,000 per month, raising a store's monthly automotive accessory receipts to between $3,500 and $4,000, or roughly 3.5% of total sales. He sees automotive accessories as a definite growth area and projects that by 1985 the items will comprise 6% to 7% of sales.

As with the other chains, NCS's best-selling product category is motor oil. Harkness says NCS stores compete directly with the discount houses on price, with each store selling an average six to seven cases of oil per week.

Motor oils generally have a mark-up of 20% to 25%, he adds, with a turnover rate of 15 times a year. At NCS, the overall product turnover rate averages 12 to 14 times.

Other automotive-related items, with an average mark-up of 40%, have a much lower turnover rate, only four to five times a year, Harkness says, but this is an acceptable rate for nonfood items.

Considered alone, growing sales of automotive accessories have yet to become a decisive marketing factor in either the strategies of the convenience chains or the responses of their oil-channel competitors. But the trend is further evidence of the strong position C-stores continue to take in the traditional realm of gasoline marketing.

—Bonnie J. Davis

# • MARKETPLACE AT A GLANCE

### AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)

| JUNE | Gasoline (All types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| U.S. City Avg. | $1.296 | $1.242 | $1.309 | $1.408 |
| Regions: | | | | |
| Northeast | 1.283 | 1.228 | 1.285 | NA |
| North Central | 1.313 | 1.272 | 1.334 | 1.369 |
| South | 1.277 | 1.222 | 1.290 | NA |
| West | 1.308 | 1.237 | 1.320 | 1.413 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

### STOCKS (Add 000 bbl.)

| | 7/30/82 | 7/31/81 |
|---|---|---|
| Gasoline (total) | 226,718 | 235,051 |
| Gasoline (unleaded*) | 92,221 | 90,468 |
| Kerosine ** | 46,130 | 50,965 |
| Distillates | 145,635 | 190,244 |
| Residual | 56,479 | 75,857 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

# Letters & Comment

## Refiner Profits

Your July 1982 issue carries a wide-ranging interview with Vic Rasheed of the Service Station Dealers of America [page 48]. While there are several highly debatable points presented in the interview, there is one point of blatant factual error.

In discussing the oil companies, Rasheed states, "Their wholesale profits on gasoline are mounting, too, from nine cents per gallon in 1974 to about 30 cents today."

This simply is not true. Amoco Oil Company currently has a profit of less than a penny per gallon on all refined products. During 1981, the transportation, refining, and marketing arm of our company actually lost money.

Amoco is making every effort to be a competitive, profitable organization in 1982. As part of that effort, we intend to do everything possible to help our dealers and jobbers be successful.

T. J. McJoynt
General Manager-Marketing
Amoco Oil Co.
Chicago, Ill.

## Refinery Closings

Over the past months you have mentioned in various columns the closing of refineries throughout the United States. As a suggestion, perhaps you might consider publishing a list of those refineries that have closed, including the owner's name and barrel capacity.

I have noticed in conversations with my fellow oil men at times that there are misunderstandings as to which refineries are closed and whether it be temporary or permanent.

Any further comments would be appreciated.

Michael J. Kelly
District Manager
Allied Oil Co.
Division of Ashland Oil
Chicago, Ill.

*Since January 1981, approximately 80 domestic refineries ranging in capacity from 1,000 b/d to more than 100,000 b/d have suspended operations temporarily (mothballed) or permanently. No formal industry list is available although the Department of Energy is said to be preparing such a report now. NPN has made its own informal tally of refinery shutdowns occurring over the past 20 months, and the 72-plant listing can be found on page 32 as part of a marketplace update filed by executive editor J. Richard Shaner in New York. The list is unofficial. We'll publish DOE's report when and if it becomes available.*

## Taxing Error

In reading your June 1982 issue, page 12, on 1981 State Gasoline Tax Collections, we found that Delaware's total was incorrect.

While the tax rate did in fact increase to 11¢ per gallon effective August 1, 1981, Delaware's revenues did not total $305,283,000. Obviously, the commas were misplaced. Also, we had an increase in revenues, not a decrease, due to the raise in the tax.

In calendar year 1981, you will note that the combined gasoline and diesel tax revenues totaled $30,838,74[illegible] for a 9.5% increase over 1980; gasoline totaled only $27,906,455, 9.6% over 1980; and special fuel only $2,932,291, 8.1% over 1980.

These are gross tax receipts which may be altered somewhat by Federal Highway Administration by deduction of refund data.

Dale A. Shuirman
Director
Division of Motor Fuel Tax
Dept. of Public Safety
Dover, Del.

### State Gasoline Tax Collections—1981

| | Gasoline Tax Rates per gal. 12/31/81 | Net Taxable Gallonage in 1981 (Add 000) | Total State Motor Fuel Tax Revenues (Add 000) 1980 | 1981 (b) | % Change |
|---|---|---|---|---|---|
| Alabama | 11.0¢ | 2,126,341 | $200,331 | $193,783 | −3.3% |
| Alaska | 8.0 | 180,049 | 14,976 | 14,872 | −0.7 |
| Arizona | 8.0 | 1,446,963 | 123,067 | 118,089 | −4.0 |
| Arkansas | 9.5 | 1,303,034 | 132,036 | 128,207 | −2.9 |
| California | 7.0 | 11,330,390 | 816,349 | 777,169 | −4.8 |
| Colorado | 9.0 | 1,528,776 | 112,261 | 124,493 | 10.9 |
| Connecticut | 11.0 | 1,327,964 | 158,174 | 152,270 | −3.7 |
| Delaware | 11.0 | 305,283 | 28,335 | 30,053 | 6.1 |
| Dist. of Columbia | 11.0 | 175,291 | 17,024 | 21,260 | 24.9 |
| Florida | 8.0 | 4,838,540 | 413,825 | 392,028 | −5.3 |
| Georgia | 17.5 | 3,086,487 | 248,565 | 236,787 | −4.7 |
| Hawaii | 8.5 | 345,733 | 28,010 | 29,915 | 6.8 |
| Idaho | 11.5 | 504,578 | 48,776 | 56,414 | 15.7 |
| Illinois | 7.5 | 5,102,930 | 374,361 | 373,987 | −0.1 |
| Indiana | 10.5 | 3,054,646 | 269,608 | 302,506 | 12.2 |
| Iowa | 13.0 | 1,714,616 | 150,830 | 183,188 | 21.5 |
| Kansas | 8.0 | 1,443,548 | 115,045 | 115,281 | 0.2 |
| Kentucky | 9.0 | 1,867,177 | 189,076 | 182,522 | −3.5 |
| Louisiana | 8.0 | 2,211,334 | 185,158 | 177,998 | −3.9 |
| Maine | 9.0 | 523,013 | 48,906 | 46,808 | −4.3 |
| Maryland | 9.0 | 1,957,794 | 186,100 | 178,176 | −4.3 |
| Massachusetts | 9.8 | 2,291,485 | 218,000 | 252,898 | 16.0 |
| Michigan | 11.0 | 4,108,255 | 461,866 | 431,845 | −6.5 |
| Minnesota | 13.0 | 2,139,238 | 218,757 | 268,083 | 22.5 |
| Mississippi | 9.0 | 1,317,197 | 128,969 | 125,856 | −2.4 |
| Missouri | 7.0 | 2,763,325 | 197,913 | 195,580 | −1.2 |
| Montana | 9.0 | 523,232 | 48,776 | 49,559 | 1.6 |
| Nebraska | 13.6 | 950,508 | 102,771 | 145,566 | 41.6 |
| Nevada | 10.5 | 533,054 | 33,701 | 45,134 | 33.9 |
| New Hampshire | 14.0 | 407,339 | 45,194 | 56,135 | 21.5 |
| New Jersey | 8.0 | 3,348,705 | 287,354 | 279,901 | −2.6 |
| New Mexico | 9.0 | 843,962 | 68,052 | 73,289 | 7.7 |
| New York | 8.0 | 5,569,766 | 473,307 | 462,496 | −2.2 |
| North Carolina | 12.5 | 3,086,132 | 296,124 | 336,181 | 13.5 |
| North Dakota | 8.0 | 455,518 | 30,661 | 34,514 | 12.6 |
| Ohio | 10.3 | 5,368,283 | 384,787 | 471,839 | 22.6 |
| Oklahoma | 6.5 | 2,013,945 | 127,197 | 129,509 | 1.8 |
| Oregon | 8.0 | 1,471,538 | 88,941 | 86,364 | −2.9 |
| Pennsylvania | 11.0 | 5,070,441 | 584,412 | 658,200 | 12.6 |
| Rhode Island | 12.0 | 380,232 | 37,511 | 43,718 | 16.5 |
| South Carolina | 13.0 | 1,674,770 | 179,555 | 199,746 | 11.0 |
| South Dakota | 13.0 | 463,754 | 48,225 | 67,128 | 39.2 |
| Tennessee | 9.0 | 2,623,250 | 219,134 | 243,640 | 11.2 |
| Texas | 5.0 | 8,735,415 | 472,132 | 459,392 | −2.7 |
| Utah | 11.0 | 788,209 | 74,057 | 80,200 | 8.3 |
| Vermont | 11.0 | 249,987 | 22,020 | 25,476 | 15.7 |
| Virginia | 11.0 | 2,717,465 | 285,517 | 276,674 | −3.1 |
| Washington | 13.5 | 1,970,632 | 246,651 | 253,461 | 2.8 |
| West Virginia | 10.5 | 903,712 | 99,315 | 94,250 | −5.1 |
| Wisconsin | 13.0 | 2,314,361 | 197,532 | 253,683 | 28.4 |
| Wyoming | 8.0 | 434,071 | 37,096 | 37,022 | −0.2 |
| **Total U.S.** | | **111,904,998** | **$9,577,740** | **$9,973,545** | **4.1%** |

(a) Tax rate for highway use; does not include federal or local taxes; (b) Preliminary.
Source: Federal Highway Administration, Table SS80-2, October 1981, issued April 1982.

*The tax collection table accompanying the June Trends article was in error. The column representing "net taxable gallonage in 1981" was presented incorrectly as "total state motor fuel revenues." A corrected and expanded table is offered here, with preliminary figures compiled and adjusted by the Federal Highway Administration. A final note to NPN Fact Book readers: The 1982 edition includes a similar error in tabulation (page 119); the accompanying table should serve as a corrected addendum.*

## Demand Forecast

We are interested in obtaining a copy of the DuPont gasoline study which was reported on in your July issue [page 30]. The article does not indicate a way to procure the study, and any information regarding the report will be appreciated.

Jeremy S. Chapman
Shortstop
Benicia, Calif.

*The study, "Forecast Demand for Transportation Fuels Through 1990," was presented at the mid-year meeting of American Petroleum Institute's (API) Refining Division in New York on May 11. Copies can be obtained from API, 2101 L St., N.W., Washington, D.C. 20037, phone 202-457-7000; or, DuPont Co.'s Public Affairs Dept., Wilmington, Del. 19801.*

## Have Terminal, Will Hire

Please accept my heartiest congratulations on the 1982 *Fact Book* issue. Frankly, I find this issue to be just as informative as many of the hardback "Oil Directories."

However, as near as I can ascertain, the only thing missing in your *Fact Book* is a listing of third-party "for hire" storage terminals. This information is available in other directories which may or may not be in the possession of the bulk of your subscribers.

Ken B. Young
Vice President/Terminal Operations
New Haven Terminal, Inc.
New Haven, Conn.

*Editorial planning and redesign work on the 1983 Fact Book already is under way. Several new information segments are being considered for that edition, including a comprehensive terminal listing. Meanwhile, those interested in leasing independently-operated bulk storage facilities may contact two appropriate trade groups: Independent Liquid Terminals Assn, 1133 15th St., N.W., Washington D.C. 20005, phone 202-659-2301; or, Independent Fuel Terminal Operators Assn., 1700 Pennsylvania Ave., Washington, D.C. 20006, phone 202-637-9060.*

## Jobber Profitability

In your October 1981 issue there appeared an article entitled, "PMEF Research: Jobber Profits Down in 1980," page 32. The article traced jobber margins from 1974 through 1980. Has this information been updated for 1981?

R.E. Withers
Chevron U.S.A. Inc.
Atlanta, Ga.

*The 1981 update of the Petroleum Marketing Education Foundation (PMEF) study on jobber profits has just become available. The full report can be obtained from PMEF, P.O. Box 11187, Columbia, S.C. 29211, phone 803-252-5646; copies are $50 each for PMEF members, $65 for nonmembers.*

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# Refiner Casualties Mount in Market Shrink

**Douglas Oil's recent decision to turn out the lights and lock the doors at its 46,500 b/d refinery in Paramount, Calif., emphasizes anew the staggering problems suppliers are having in coping with shrinking markets and changing patterns.**

Parent Conoco said the refinery is on the block. This is not exactly surprising because industry circles had been saying for months that the refinery could be had if the buying price were right.

As this came to pass, reports persisted that Atlantic Richfield was trying to do something with or about its 185,000 b/d refinery in Philadelphia. Arco spokesmen were enigmatic about the whole affair while rumored buyers issued denials of involvement [NPN—Aug. p9].

In the Midwest, reports surfaced again that Apex Oil Co., St. Louis, is still looking for a potential buyer for the two refineries it acquired when it bought Clark Oil & Refining Corp., Milwaukee, last year [see story on facing page]. These have a total capacity of 130,000 b/d and are located at Blue Island and Hartford, Ill.

Refineries are hard to dispose of in the shrinking marketplace. Gulf Oil, for example, had its 51,500 b/d refinery at Sante Fe Springs, Calif., on the market for two or three years before it finally decided to keep it for the time being.

Meanwhile, Department of Energy noted in its annual survey of U.S. refineries that the industry had an operable capacity of 17,889,734 b/d on March 31, 1982, of which 1,786,155 b/d were idle.

It also reported that of the 17.9-million b/d capacity, the first quarter input amounted to only 11.7-million b/d, or a utilization rate of just 65.8%.

Over and above this, DOE said that 450,940 b/d of crude capacity had been shut down permanently in 1981 and early 1982. The DOE figure obviously does not include around 1-million b/d of capacity that has been mothballed or shut down for an indefinite period without being classified as permanently out of business.

*NPN* has compiled a tally of its own—by checking with a variety of industry sources and reports—of refineries which have been shut down temporarily or permanently. This listing may include some facilities merely involved in prolonged turnarounds, or some small blending plants that were being squeezed too hard to continue operating. The *NPN* listing involves almost 1.5-million b/d of refining capacity. It must be emphasized, however, that this listing is a working compilation for shop-talk discussion rather than a hard-and-fast tally that is complete, final and official.

**Refiners with 100,000 b/d or more of total capacity:**

| | |
|---|---|
| **Chevron** | |
| Baltimore, Md. | 13,500 |
| **Amoco** | |
| Wood River, Ill. | 108,000 |
| Sugar Creek, Mo. | 104,000 |
| Baltimore, Md. | 15,000 |
| **Texaco** | |
| Lockport, Ill. | 72,000 |
| West Tulsa, Okla. | 50,000 |
| Casper, Wyo | 21,000 |
| **Gulf** | |
| Toledo, Ohio | 50,300 |
| Venice, La. | 28,700 |
| **Mobil** | |
| Buffalo, N.Y. | 43,300 |
| **Ashland** | |
| Buffalo, N.Y. | 64,000 |
| Findlay, Ohio | 20,400 |
| **Phillips** | |
| Kansas City, Kans. | 80,000 |
| **Conoco** | |
| Paramount. Calif. | 46,500 |
| Wrenshall, Minn. | 23,500 |
| **Coastal Pacific Refining** | |
| Hercules, Calif. | 85,000 |
| **Energy Cooperative** | |
| East Chicago, Ind. | 126,000 |

**Refiners with 30,000 to 99,999 b/d of total capacity:**

| | |
|---|---|
| **Farmland Industries** | |
| Phillipsburg, Kans. | 26,400 |
| Scottsbluff, Neb. | 5,600 |
| **Amerada Hess** | |
| Port Reading, N.J. | 68,000 |
| (scheduled to be reopened in 1983) | |
| **Husky Oil** | |
| Cody, Wyo. | 11,500 |
| **Southern Union** | |
| Monument, N.M. | 5,400 |
| **Uni International** | |
| Ingleside, Tex. | 39,400 |

**Refiners with 10,000 to 29,999 b/d of total capacity:**

| | |
|---|---|
| **International Processors** | |
| St. Rose, La. | 28,600 |
| **Manatee Energy** | |
| Port Manatee, Fla. | 28,400 |
| **ATC Petroleum** | |
| Newington, N.H. | 13,400 |
| Wilmington, N.C. | 11,900 |
| **Boswell Oil Co.** | |
| Mt. Airy, La. | 23,000 |
| **Southland Oil** | |
| Yazoo City, Miss. | 5,500 |
| **Dow Chemical** | |
| Bay City, Mich. | 20,000 |
| **San Joaquin Refining** | |
| Oildale, Calif. | 20,000 |
| **Martex Petroleum** | |
| Los Angeles, Calif. | 19,000 |
| **West Coast Oil** | |
| Oildale, Calif. | 19,000 |
| **Seminole Asphalt** | |
| St. Marks, Fla. | 13,000 |
| **Friendswood Refining** | |
| Friendswood, Tex. | 12,500 |
| **Petraco-Valley Oil** | |
| Brownsville, Tex. | 12,300 |
| **Ergon Refining** | |
| Vicksburg, Miss. | 11,800 |
| **T & S Refining** | |
| Jennings, La. | 10,200 |
| **Anchor Refining** | |
| McKittrick, Calif. | 10,000 |
| **Shepherd Oil** | |
| Jennings, La. | 10,000 |
| **Sector Refining** | |
| Palestine, Tex. | 10,000 |
| **Thagard Oil** | |
| South Gate, Calif. | 10,000 |
| **Carbonit Refinery** | |
| Hearne, Tex. | 10,000 |

**Refiners with 2,500 to 9,999 b/d of total capacity:**

| | |
|---|---|
| **E.Z. Serv** | |
| Shallow Water, Kans. | 9,500 |
| **Copano Refining** | |
| Ingleside, Tex. | 9,500 |
| **Wickett (El Paso) Refining** | |
| Wickett, Tex. | 8,000 |
| **Vicksburg Refining** | |
| Vicksburg, Miss. | 7,900 |
| **Sabre Refining** | |
| Bakersfield, Calif. | 7,500 |
| **Quad Refining** | |
| Bakersfield, Calif. | 7,000 |
| **Tipperary Corp.** | |
| Ingleside, Tex. | 6,500 |
| **Bi-Petro** | |
| Pana, Ill. | 6,200 |
| **Glenrock Refinery** | |
| Glenrock, Wyo. | 6,000 |
| **Road Oil Sales** | |
| Bakersfield, Calif. | 6,000 |
| **Bayou State Oil** | |
| Hosston, La. | 5,900 |
| **Sooner Refining** | |
| Darrow, La. | 5,400 |

| | |
|---|---|
| **Huntway Refining** | |
| Wilmington, Calif. | 5,400 |
| **Adobe Refining** | |
| La Blanca, Tex. | 5,200 |
| **Princeton Refining** | |
| Princeton, Ind. | 5,000 |
| **Northland Refining** | |
| Dickinson, Ill. | 5,000 |
| **Gibson Refining** | |
| Bakersfield, Calif. | 4,600 |
| **Kentucky Oil & Refining** | |
| Betsy Lane, Ky. | 3,000 |
| Troy, Ind. | 1,500 |
| **Burlington Northern** | |
| Osage, Wyo. | 4,015 |
| **Oxnard Refinery** | |
| Oxnard, Calif. | 4,000 |
| **Mid-America Refining** | |
| Chanute, Kans. | 3,500 |
| Refiners under 2,500 b/d of total capacity: | |
| **Texas Standard** | |
| Houston, Tex. | 2,000 |
| **Texas Refining** | |
| Midland, Tex. | 1,800 |
| **Port Petro** | |
| Stonewall, La. | 1,800 |
| **Wireback Oil** | |
| Plymouth, Ill. | 1,800 |
| **Dillman Oil** | |
| Robinson, Ill. | 1,000 |
| **Energy Development** | |
| Crossville, Ill. | 1,000 |
| **Southwestern Refining** | |
| La Barge, Wyo. | 1,040 |
| **Total Refining Capacity Cut** | **1,421,155 b/d** |

NPN

# No Rise Out of First Half

**Even though gasoline prices rose modestly in the second quarter, oil's net earnings didn't.**

Of the top 20 companies, only a handful bettered their 1981 performances. These included Atlantic Richfield, up 2.3% in the second quarter and 3.6% for the first half. Union Oil was off 5% in the second quarter but managed to wind up the half with an overall increase of 1%. Tosco, aided mostly by the close-out of its oil shale partnership with Exxon, had a good second quarter and first half.

Ashland, whose fiscal year ends Sept. 30, reported good earnings in the third-quarter and nine-month periods.

Marathon Oil, merged with U.S. Steel in late 1981, helped bail out the Pittsburgh manufacturer's second-quarter and first-half earnings. DuPont Co. also reported a weak second quarter and first half, but noted that the earnings of Conoco, the other big merger target in 1981, helped soften the blow somewhat.

NPN

## Second Quarter and First Half Earnings

(Add $000,000)

| Company | 2nd Qtr. 1982 | 2nd Qtr. 1981 | % Chng. | 1st Half 1982 | 1st Half 1981 | % Chng. |
|---|---|---|---|---|---|---|
| Exxon | $885.0 | $1,825.0 | (51.5)% | $2,125.0 | $3,425.0 | (38.0)% |
| Mobil | 310.0 | 700.0 | (55.7) | 636.0 | 1,340.0 | (52.5) |
| Texaco | 305.0 | 556.0 | (45.1) | 672.0 | 1,214.0 | (44.6) |
| Stand. of Calif. | 263.0 | 616.0 | (57.3) | 493.0 | 1,280.0 | (61.5) |
| Stand. of Ind. | 382.0 | 553.0 | (30.9) | 852.0 | 930.0 | (8.4) |
| Gulf | 210.0 | 311.0 | (32.5) | 477.0 | 614.0 | (22.3) |
| Shell | 380.0 | 410.0 | (7.3) | 724.0 | 771.0 | (6.1) |
| Atlantic Rich. | 409.8 | 399.8 | 2.3 | 795.2 | 767.9 | 3.6 |
| Stand. of Ohio | 473.2 | 478.7 | (1.1) | 927.8 | 999.1 | (7.1) |
| Sun | 110.0 | 236.0 | (53.1) | 234.0 | 418.0 | (44.0) |
| Phillips | 139.0 | 229.8 | (39.5) | 328.7 | 500.6 | (34.3) |
| Getty | 151.5 | 205.1 | (26.1) | 315.4 | 435.2 | (27.5) |
| Union | 197.6 | 207.9 | (5.0) | 386.1 | 382.4 | 1.0 |
| Amerada Hess | 61.1 | (33.7) | — | 44.9 | 58.9 | (23.8) |
| Cities Service | 74.4 | 90.5 | (17.8) | 127.7 | 148.2 | (13.8) |
| Tenneco | 204.0 | 203.0 | 0.5 | 333.0 | 397.0 | (16.1) |
| Ashland (a) | 69.1 | 13.3 | 419.5 | 105.0 | 40.8 | 157.3 |
| Kerr-McGee | 50.2 | 51.4 | (2.3) | 79.4 | 94.8 | (16.2) |
| Diamond Sham. | 31.8 | (44.0) | — | 96.8 | 7.1 | 1,26 |
| Murphy | 41.7 | 45.0 | (7.3) | 75.1 | 83.4 | (10.0) |
| Amer. Petrofina | 10.9 | 15.3 | (28.8) | 26.9 | 35.5 | (24.2) |
| Tosco | 95.5 | 12.1 | 689.3 | 95.7 | (26.6) | — |
| Pennzoil | 44.6 | 59.1 | (24.2) | 84.7 | 119.3 | (29.0) |

---

(a) Third quarter and nine months; fiscal ends 9/31.

[illegible]

# Clark Sued over Apex Merger; Preparing to Sell Marketing Units?

**While Clark Oil & Refining Corp. whirls in recent corporate changes stemming from its merger with Apex Oil of St. Louis, Clark is being thumped with a $2-million suit alleging it short changed its financial advisors on fees from last summer's merger.**

According to court documents, Lehman Brothers Kuhn Loeb, Inc. is suing Clark for breach of contract. The New York-based brokerage firm, which had advised the refiner-marketer on financial matters since 1977, alleges that its retainer for negotiating the merger with Apex should have been 0.4% of the acquisition price.

Apex acquired controlling interest of then Milwaukee-based Clark for $483-million. By Lehman Brothers' count, it should have received $1,932,000 as its consulting fee.

But in its legal response to the charge, Clark says the fee should be $250,000. Clark offered that sum to Lehman Brothers last January, but the firm refused it, according to papers filed in U.S. District Court in Missouri.

A spokesman for Lehman Brothers said only that the matter was a "simple commercial dispute." No spokesman for Apex or its Clark subsidiary could be reached for comment.

The suit comes to light about one year after Clark agreed to merge with the Midwest's most enigmatic independent oil marketer, Apex. In taking over Clark, Apex found itself retailing gasoline for the first time and became the owner of 135,000 b/d of refining capacity.

Lately, there have been unconfirmed rumors that Apex is ready to spinoff Clark's refineries and service stations. Some changes to the Clark subsidiary emerged in late June when Apex said it would move Clark's headquarters from Milwaukee to St. Louis later this month.

Apex will fire or lay off most of the Milwaukee office employees, and retain just enough people to run refinery and service station operations, former Clark chairman Robert Reed (now at Apex) told reporters. All of Clark's stations are company operated.

Planned changes include dropping the more than 160,000 Clark credit cards soon. Adminstration costs are too high for the card, which accounts for roughly 6% of gasoline sales, Clark sources say. Apex has not heavily promoted the Clark card since it acquired the company.

In addition, Clark will stop honoring Visa and Mastercard bank cards which it began accepting last January. Any further cuts to Apex retail operations were not obvious by late July.

NPN

# Motor Oil Market Drain Continues

**The 'do-it-yourself' category now accounts for 70% of motor oil purchases, while flat demand and the recession combine to make price the consumer's No. 1 buying criterion.**

**Seven out of 10 motor oil buyers prefer to "do it themselves," than have their oil added or changed at the "traditional" outlet. Just four years ago, the service station retailer was losing only five of those 10.**

The traditional retail oil marketer is losing the fight in a 550-million-gal. a year marketplace to the mass merchandiser. If he wants to block the exodus of motor oil customers, he has to make a choice: either meet mass merchandisers' prices at his convenience stores; or heavily promote the service that his service station (or quick lube outlet) can provide, and hope for his share of the three out of 10 "non-do-it-yourselfers."

These conclusions emerge from discussions with refining and marketing experts, and a consumer study supplied by NPD Research, Inc. of New York. That national survey of motor oil buying behavior profiles the desertion of the service station channel's motor oil clientele. It states:

**About NPD Research:**

*NPD Research, Inc. is a division of NPD/HTI, one of the ten largest market research companies in the country. Figures used in this story were taken from NPD's "Petroleum Marketing Index," and compiled by the company for* NPN. *Motor oil consumption data are obtained monthly from more than 4,000 families nationwide. This sample is balanced to reflect demographic make-up of the nation as a whole.*

- Mass merchandisers dominate volume. Last year, 55% of passenger car motor oils were sold through discount stores, department stores, supermarkets, drug stores and similar outlets. The prime competition among major companies today is to get exposure on those 50-ft shelves.
- "Traditional" outlets, however, are not hopelessly behind. Service stations alone sold 24%, while car dealers, auto supply stores and tire stores/garages combined sold 20%. (Quick lubes have roughly 1% market share.)
- After rapid gains during the 1970s, "do-it-yourself" (DIY) consumers now account for 70% of motor oil purchases. (Several manufacturers are convinced this level has reached its peak.) "Reliers" (versus DIYers) comprise nearly all of the "traditional" outlets' motor oil business.
- Flat demand and recessionary conditions combine to make price the consumer's most important buying criterion. One market analyst estimates that most motor oil decisions depend on price differentials between brands.
- The buyer who receives a discount or rebate deal will purchase an average three quarts more than the buyer who pays "full price." The average mass merchandiser price beats the average service station price by 50¢ a quart.

### Demand Shrinking

The market for automotive motor oil isn't what it used to be. Estimates from the National Petroleum Refiners Assn. (NPRA) show that motor oil demand peaked in 1978 at more than 660-million-gal. Demand in 1980, dropped nearly 7% to 615-million gal. And, revised totals for last year show demand in the 550-million-gal. range.

Economic and engine-crankcase factors, however, are taking a 0.4% per year bite out of demand in the 1980s, estimates Exxon Chemical Americas in a recent lubricants report.

Since 1977, American drivers have increased by roughly 2% a year the number of miles they drive before they add a quart of oil, figures show. In fact, between now and 1990, the average car owner will change motor oil only nine times for every 10 that he changes it today. By that time, he also will add close to a third less oil a year (excluding changes) than he did this year.

In recent years, lube marketers could blame the trend to fewer changes on smaller crankcases and automakers who recommended longer drain intervals. But that is only part of the story.

"Car manufacturers are not extending their recommended drain intervals as much as the economy is causing people to change oil less often," explains a marketing spokesman for Quaker State. (The company occupies the top spot in the motor oil market, garnering a 19.6% share in 1981, reports NPD Research.)

"There will be very little if any demand growth in the next five years," he says. "Fewer miles driven as a result of a recession is as much a cause as any single factor."

Across the board, consumers are spending less this year, as a result of the recession. Factor out inflation, and they spent no more in the first quarter of this year on oil and gasoline than they did in first-quarter 1981, Department of Commerce figures show.

The average volume of motor oil bought per customer also has dropped in recent years. According to NPD Research, the average fell more than 20% from 1979 to 1980, and hasn't picked up since. Full-case purchases have declined in some areas, often in favor of half-case purchases, NPD reports.

Texaco U.S.A.—which could overtake Valvoline in market share by next year, says NPD—has pursued the price-conscious DIYer with "extensive marketing"

'Traditional' marketers have to make a choice: either meet the mass merchandisers' price; or promote the oil change service provided by their stations or quick lube stores.

of its Easy-Dozen 12-pack, says a company spokesman. The half-case package began in Midwest and West Coast markets in 1981, and was expanded nationwide last January.

### Sky the Limit for DIYer?

"Some people are always going to have their car serviced," says a Quaker State advertising spokesman. "But then, 10 years ago, we all thought the DIYer would never reach 60%. And now, it's up to around 70%," he adds.

Oil jobbers and other traditional retail motor oil marketers have substantial research now on the type of customer that tends to be a do-it-yourselfer. A DIYer most often is male, living in the South or West and has just a little less money in his pocket than the so-called "relier."

Research from NPD shows that 76% of DIYers are male. A third of them are between 35 and 49 years old. They are somewhat younger than the relier. (DIYer median age is 42 years, versus 47 years for the relier.) Median family income for both groups is between $20,500 and $21,000, according to NPD's findings.

As far as where the DIYer lives, survey results show Southwest, Mountain and upper Midwest states have the highest concentrations of such purchasers. Whereas, the New England and Mid-Atlantic states have the lowest. That can help the oil jobber decide which consumer he should shoot for.

"The DIYer tends to be less of a brand-loyal buyer than the relier," says an NPD analyst, although the survey did not specifically track brand preference. The message for the traditional oil marketer seems to be to stock with price, rather than brand consistency, in mind.

"I'd like to think quality is the buyer's determining factor," says a Quaker State advertising spokesman. "But price is the thing; there's no getting around it."

The data tend to confirm these statements. The service station channel has not met the mass merchandiser's price. Last year, the overall average retail price for a quart of motor oil was $1.17, according to NPD's survey. The mass merchandiser's average price was 98¢ per quart, compared to the "traditional" outlet's $1.45.

The difference is service. And that's the oil jobber's other option.

"There will always be a certain number of people who are not going to get under their cars and change the oil," says Jack Beman, Jr., president of Pennzoil's motor oil division. That service angle is the main reason the company opened its ten quick lube outlets in 1980. The outlets have bolstered the company's bulk motor oil sales, he says.

While packaged motor oil represents some 80% of total industry sales, Beman estimates, bulk oil at service stations and quick lube outlets best serves the convenience-minded relier.

"The future market taken as a whole seems to be flat. But it could move closer to a balance between quick lubes [for reliers] and the DIYer from here on out," he suggests.

**Motor Oil Market Share Battle**

| Retail Segment | 1981 Average Retail Price | Primary Market | Market Share 1981 | Market Share 1978 |
|---|---|---|---|---|
| Mass Merchandiser (discount stores, department stores, supermarkets, drug stores and others) | $0.98 (a) | DIY (b) | 56% | 51% |
| Service Stations | $1.48 | Reliers (c) | 24% | 26% |
| Other "Traditional" Outlets (car dealers, auto supply stores, garages and tire stores) | $1.44 | Reliers/DIY | 21% | 23% |
| Total Industry | $1.17 | | | |

(a) Assumes average prices are comparable in "department store" sub-category; (b) "Do-it-yourself" buyers last year accounted for 70% of passenger car motor oil purchases; (c) "Relier" buyers (those who rely on servicemen) accounted for 30% of passenger car motor oil purchases in 1981.
Source: NPD Research, Inc. and *NPN*.

### Forever Price-Minded?

Major companies have reacted to DIYers' demand, especially during competitive driving-season months. Prior to last month, Quaker State had never offered consumer rebates. The company's $1.50 rebate on five-quart purchases will end this month. Valvoline—the number three motor oil marketer—promotes an elaborate scheme of graduated rebates with larger purchases.

Some majors offer free case deals for their wholesalers: one free for seven bought; five for 45, eight for 92, and so on. There also are supplier discounts for wholesalers who drive up to the rack.

But the real question is: How long will deals be the only thing that results in a sale?

To date, Pennzoil has shunned price-cutting measures, says Beman. Rather, the company was among the first refiners to promote fuel economy in its motor oil advertising, he says. (Pennzoil maintained a 17.5% market share in 1981, right behind Quaker State, reports NPD.)

As a whole, quality will change more than demand in the 1980s, projects the Exxon Chemical report. High-performance, multi-grade lubricants will attain another 10% share of the motor oil market by 1985 to reach 75%, according to its estimates. (Pennzoil's multi-grade 10W-40 already represents 50% of all its motor oil sales revenue, says Beman.)

Synthetic lubricant watchers, however, have seen more smoke than fire from that market segment. Ever since 1976, when Mobil 1 shot resoundingly into the marketplace, synlubes have not mustered more than 1% to 2% of the motor oil field.

The main reason for that is price. Mobil 1, for example, currently sells for at least $3.70 retail—twice what the mineral-based motor oils cost consumers.

"But there's a very definite group of people who want to use Mobil 1," says Nick Esty, general manager of Mobil marketing services. "That is, the more affluent person and the DIYer, who knows the difference in products for his car," he says. Test-proven differences between Mobil 1 and regular motor oils reveal better fuel economy, superior severe-weather performance and longer drain periods, he and other non-Mobil experts note.

For now, however, oil jobbers who want to improve their share of this market segment had better devote more convenience-store shelf space to motor oils, in order to get the retail price down. His only other option is to promote an oil change service, and hope there will continue to be enough people out there who prefer not to change their own motor oil.

October, 1982

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NOJC: Is Retail Divorcement Its Next Target?

Why Chicago Firm Built 64-Hose 'Ultra' Pumper

How an Indie Helps Majors Cut Prices in Dallas

# NPN

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*Jobbers: Partner or Punching Bag?*

## No Let Up In Pressures

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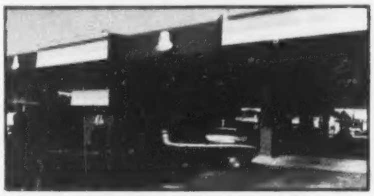
Jobbers, once "serenaded" by their suppliers, seem to be getting hit from all directions nowadays. Their margins, freight allowances and credit terms are under attack. Now dealers are trying to ban their direct retail operations. Page 62.

**Cover illustration by Bud Clarke.**

EXXON
DIESEL

Exxon USA, in a move that catches some marketers by surprise, is planning to withdraw "in an orderly fashion" from parts of the Northeast. It is also trimming back the capacity of its Linden, N.J., refinery by about 100,000 b/d. Page 23.



Most high-volume gasoline marketers believe twelve to sixteen hoses are sufficient for their big pumpers. Not enough, says Tom Campbell, director of retail operations for Bell Fuels Inc., Chicago. The company has built a 64-hose unit—a throwback to the extra-large, multi-pump outlets of the past. Page 70.

# • TRENDS

**Every year in Oshkosh, Wisc., thousands of flyers, would-be flyers and other aviation enthusiasts gather for the annual Fly-In and Sport Aviation Exhibition staged by the Experimental Aircraft Assn. That in itself is nothing unusual. However, a significant announcement was made at the 1982 Fly-In, one that many marketers should be aware of.**

Federal Aviation Administration (FAA) chief J. Lynn Helms revealed at the Fly-In that his agency had, for the first time, approved the use of regular unleaded gasoline in a production aircraft. The plane is the Cessna C-150, which comes in about a dozen different models. It uses a simple, low-compression engine made by Teledyne Corp.

The FAA decision is not heralded as the beginning of an era in which all, or even most, private aircraft will begin operating with the same unleaded gasoline that goes into Fords and Chevys. In his statement at Oshkosh, Helms cautioned that the C-150 is not a high performance aircraft and the FAA ruling should not be taken as an indication to airplane manufacturers that they start lining up for similar approvals. Nor should it be an indication for oil marketers to start lining up aircraft accounts for their gasoline supplies.

The Experimental Aircraft Assn. spent years testing automotive gasoline in various planes, before the C-150 tests made the FAA decision possible, and it may take a similar period of time before other aircraft can be proven to operate safely on ordinary gasoline.

But taking all of this into consideration, the owners of small private airplanes are ecstatic over the FAA's announcement. For them, at least, the feeling is that the FAA has taken the first—and most difficult step—toward widespread use of motor gasoline in aircraft. The rest, they believe, will be much easier now. The trend has been started and the economic interests of aircraft manufacturers, oil refiners, petroleum marketers and private pilots can now converge.

What set the stage for these developments was the decision by several major refiners to cut back or eliminate production of 80-oct. aviation gasoline, the fuel used by most light planes.

As recently as two years ago, the prices of regular gasoline and 80-oct. fuel were roughly comparable. Aviation gasoline was only slightly higher. Today, the FAA says, automotive fuels are available at roughly $1.20 to $1.25 gal., while aviation fuel is "well over $2 per gallon."

It was that extreme price spread—and the corresponding supply problems—that prompted the C-150 tests. With price controls long gone and refinery costs increasing, the problem for private flyers probably will get worse, not better.

For a major refiner, the aviation gasoline market isn't large enough to justify extensive production of special 80-oct. gasoline blends. In all of 1980, production of aviation fuel was a mere 13-million bbl.

But for marketers, a new 13-million-bbl. market is not easy to ignore. Over the long term, the FAA's decision may be one possible solution to the dilemma of shrinking volumes and receding margins.

What makes the aviation market even more attractive to many marketers is, for example, the ease with which a small municipal airport can be brought on as a customer. No fancy marketing strategies or expensive retail facilities are necessary in such an operation.

While the FAA's Helms was quick to point out that there aren't any immediate plans to permit other aircraft to use automotive gasoline, he failed to note that the C-150 is one of the most popular single-engine private planes now in production. Among other things, it is the most widely used for flight instruction nationwide.

In short, there's a market out there now. And given the difference in price between aviation gasoline and automotive fuel, there is likely to be significant growth over the next few years. Says one FAA official: "If I were operating a flight school right now, a plane that operates on lower cost fuel would be mighty attractive."

Much of what happens in the next few years in this market will depend on the record of the C-150s using automotive gasoline. FAA officials say the Experimental Aircraft Assn. tests—and future FAA monitoring—have and will keep close tabs on such things as engine wear, valve sticking and particularly incidents of vapor lock.

A relatively clean record would go a long way toward convincing the FAA that what's good for the C-150 might be good for other aircraft types. And to be sure, the FAA still has some reservations. For example, the recent decision does not allow the use of automotive fuel in C-150s that are used for air-taxi services or other charter-type arrangements.

If those restrictions eventually are lifted, a significant milestone will have been passed, aircraft industry sources say.

"That's when you'll really see this become a bright spot for gasoline marketers." —**Tom Goldsmith**

# • MARKETPLACE AT A GLANCE

**AVERAGE GASOLINE PRICES IN THE U.S. (¢ per gal.)**

| JULY | Gasoline (All types) | Leaded Regular | Unleaded Regular | Leaded Premium |
|---|---|---|---|---|
| U.S. City Avg. | $1.318 | $1.263 | $1.331 | $1.450 |
| Regions: | | | | |
| Northeast | 1.308 | 1.250 | 1.310 | NA |
| North Central | 1.327 | 1.283 | 1.349 | 1.374 |
| South | 1.295 | 1.236 | 1.308 | NA |
| West | 1.348 | 1.280 | 1.360 | 1.459 |

*Source: U.S. Dept. of Labor, Bureau of Labor Statistics.*

**STOCKS (Add 000 bbl.)**

| | 8/27/82 | 8/28/81 |
|---|---|---|
| Gasoline (total) | 225,097 | 232,078 |
| Gasoline (unleaded*) | 91,933 | 90,790 |
| Kerosine ** | 44,722 | 51,757 |
| Distillates | 158,428 | 204,254 |
| Residual | 50,689 | 74,330 |

**Included in gasoline total.*

***Includes jet fuel.*

*Source: American Petroleum Institute.*

# Fuel Oil Briefs

## Keil Oil Offers Discount Prepay Plan

**For the second year in a row, an aggressive fuel oil dealer in northern New Jersey attracted a host of new accounts by guaranteeing a maximum price of $1.15 gal. to all those who prepaid their winter season's bill by Aug. 1.**

Keil Oil Co., Riverdale, says its modest newspaper advertising campaign churned up "about 170 people interested in the program." That's about twice as many as responded last winter.

Roughly, this means Keil Oil could expect a cash bonanza of about $170,000 to start off the year. This, at a time when many companies are having ruinous cash-flow problems and praying for an early onset of cold weather to get things moving.

Keil Oil has 2,000 accounts in four counties in northern New Jersey. Its volume is about 2-million gal. a year.

The program works this way:

If homeowners prepaid their bills by Aug. 1, they were offered a guaranteed maximum price of $1.15 gal. If the price is lower throughout the year, they get the benefit of the cheaper cost.

Keil uses an average of 800 gal. per home—"some are more, some are less, but it comes out to about that," a spokesman says. This means the average homeowner prepays about $1,000.

Naturally, each home prepays in relation to last year's consumption. For those whose bills are on the high side—say $1,200 or $1,500, Keil offers them the chance to prepay $1,000 to get the guaranteed maximum for as long as the payment lasts, before paying normal delivery prices for the balance of the year.

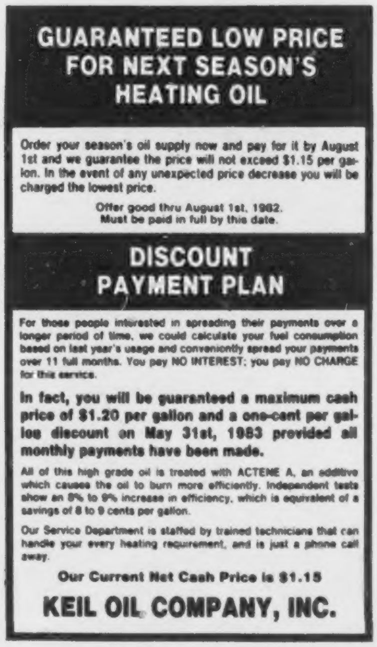
For those preferring a budget plan, Keil Oil will work that out, too. Payments may be spread over 11 months for a guaranteed maximum price of $1.20 gal., with a 1¢-gal. discount on May 31 if all monthly payments have been made on schedule.

The price guarantee program, of course, is not without its share of risks. For one thing, the company says it is not involved in "hedging" its winter fuel oil prices in the New York oil futures market, and so therefore is relying on brute market behavior to see its program through.

Severe weather or a bad break in the Mideast could upset the fuel oil business and stretch its ability to service all of its customers. There could be spot shortages. If things like that come to pass, fuel oil prices will rise to the occasion. They've done so in the past.

That could put a strain on Keil's guaranteed $1.15 gal.

"It's nice to have a bundle of cash now," says the spokesman. "But then we will have to worry about January and February, too."



GUARANTEED LOW PRICE
FOR NEXT SEASON'S
HEATING OIL

Order your season's oil supply now and pay for it by August 1st and we guarantee the price will not exceed $1.15 per gallon. In the event of any unexpected price decrease you will be charged the lowest price.

Offer good thru August 1st, 1982.
Must be paid in full by this date.

DISCOUNT
PAYMENT PLAN

For those people interested in spreading their payments over a longer period of time, we could calculate your fuel consumption based on last year's usage and conveniently spread your payments over 11 full months. You pay NO INTEREST; you pay NO CHARGE for this service.

**In fact, you will be guaranteed a maximum cash price of $1.20 per gallon and a one-cent per gallon discount on May 31st, 1983 provided all monthly payments have been made.**

All of this high grade oil is treated with ACTENE A, an additive which causes the oil to burn more efficiently. Independent tests show an 8% to 9% increase in efficiency, which is equivalent of a savings of 8 to 9 cents per gallon.

Our Service Department is staffed by trained technicians that can handle your every heating requirement, and is just a phone call away.

**Our Current Net Cash Price is $1.15**

**KEIL OIL COMPANY, INC.**

**Keil Oil's Advertisement**

## Low Profiles Are Hurting Fuel Oil Dealers

**Joe Somma, associate director of Fuel Merchants Assn. of New Jersey, implies that many fuel oil dealers may be their own worst enemies by failing to provide their customers with good images and strong identifications.**

While assisting the Mercer County Fuel Assn.'s raffle of 250 gal. of home heating oil during a heritage day festival in Trenton, N.J., recently, Somma says he was made aware of the fact that many customers didn't even know the names of their suppliers. "Between 40% and 50% of the home-owners who entered the drawing during the day I was there could not name their fuel oil dealer," he said.

W.F. Ward, president of Ward's Fuel Service, Trenton, confirms Somma's observations. He spent two days at a Mercer fair booth and found that 40% of the homeowners couldn't name their supplier. Another surprise: "They [consumers] are familiar with the color on the trucks and think their dealer is Exxon or Gulf, when it isn't."

He suggested that more dealer promotion is needed to strengthen the company image.

## N.Y. Marketers Continue to Lose to Gas Conversions

**Though fuel oil jobbers happily report that the trend in oil to natural gas conversions is down, gas utilities continue to take a heavy toll on the market.**

One oil marketing group recently released figures which lend some perspective to the ongoing costs to jobbers of oil-to-gas conversions—representing revenues and customers the fuel oil business may never recapture.

The Empire State Petroleum Assn. (ESPA), in a report compiled by the New York Public Service Commission based on data collected from utilities, says that gas utilities converted 30,866 heating oil customers in New York in 1980-1981, and a projected 27,831 more in 1981-1982.

The volume of heating oil displaced reportedly amounts to 54-million gal. for 1980-1981, and 39.9-million gal. for 1981-1982. At current retail prices these figures reflect a $122-million loss in business for fuel oil marketers.

The two most successful utilities in the oil-to-gas conversion business are Brooklyn Union and Long Island Light Co., both located in the greater New York metropolitan area.

Brooklyn Union snared more than 13,000 customers from oil-heat businesses while Lilco, the more aggressive of the two, scooped up more than 18,000 customers during the two-year period. Consolidated Edison, the world's largest utility, converted more than 8,000 consumers of fuel oil to gas burners.

ESPA reports that since 1978, the gas utilities have coaxed more than 138,000 oil-heat accounts into their fold.

Viewed from another angle, this means the utilities converted an average 198 establishments per working day in 1978-79; 138 per day in 1980-81, and 120 per day in 1981-82. The accompanying table contains the New York state breakdown, as reported by ESPA. **NPN**

## New York State Oil to Gas Conversions

| | Actual | | | Projected |
|---|---|---|---|---|
| | 1978-79 | 1979-80 | 1980-81 | 1981-82 |
| Residential | 19,860 | 45,484 | 30,866 | 27,831 |
| Commercial | 2,433 | 4,287 | 3,820 | 2,211 |
| Industrial | 297 | 337 | 338 | 287 |
| **Total** | **22,590** | **50,108** | **35,024** | **30,429** |

PRICE: $35.00

ANNUAL 1982 ISSUE

# NPN

## National Petroleum News

A PUBLICATION FOR MARKETING MANAGEMENT • OPERATIONS • FUEL OIL • TBA AFTERMARKET

# 1982 FACT BOOK

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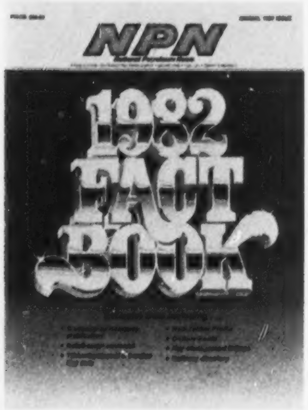

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# Ranking The Top Marketing Companies

**Marketplace retrenchments** that had been expected to follow swiftly in the wake of gasoline decontrol in January 1981 didn't quite live up to their advance billings. Most oil companies proceeded cautiously, confounding critics who had been weeping and wailing that the world would all but come to an end if free enterprise returned to the oil marketing industry. As a result, there was some minor shifting in asset values and rankings but not enough to make much of a dent in the traditional standings.

The rankings of the companies *(right)* is on an assets basis. The top 22 have at least $1-billion worth of facilities and resources. Significantly, Conoco was dropped from the current standings because it was absorbed by DuPont Co. in a 1981 merger and no longer reports its earnings on an independent basis. Marathon is probably on the list for the last time too inasmuch as it was taken over by U.S. Steel Corp. earlier this year and is now a division of that firm.

Otherwise, despite eroding prices and moderate retrenchments, 1981 was another year of billionaires, i.e., oil companies that made at least $1-billion in their 1981 earnings.

Exxon again led the pack with a net of $5.6-billion. Others, in descending order, were Mobil, with $2.4-billion; Standard of California, $2.3-billion; Texaco, $2.3-billion; Standard of Ohio, $1.9-billion; Standard of Indiana, $1.9-billion; Shell, $1.7-billion; Atlantic Richfield, $1.6-billion; Gulf, $1.2-billion; Sun, $1.0-billion.

All but Sun had been members of the 1980 billionaires club. Phillips, which earned a bit more than $1.0-billion in 1980, dropped out of the running for the time being. Conoco also made a billion in 1980 but was eliminated by the DuPont acquisition in 1981.

Forecasts for 1982 indicate that not only will consumption decline again but prices and margins will too. This could mean that the 1982 nets will be materially below those of 1981. And again, it could mean that the borderline members of the billionaires club won't be able to retain their esoteric rankings in 1982.

For a while in late 1981, it appeared that the second flight of independent oil companies might be merger targets of the larger companies. Mobil, for example, went after both Conoco and Marathon but lost not only the bidding wars but also the court scuffles over the legality of the moves. Industry sources thought that if Mobil had been successful, it could have opened the doors for all sorts of acquisition maneuvers by major oil companies and non-oil companies seeking diversification.

| | Total Assets | | Net Income | | Net Sales Ranking Among 500 U.S. Corporations (a) | |
|---|---|---|---|---|---|---|
| | 1981 | 1980 | 1981 | 1980 | 1981 | 1980 |
| Exxon Corp. | 1 | 1 | 1 | 1 | 1 | 1 |
| Mobil Oil Corp. | 2 | 2 | 2 | 2 | 2 | 2 |
| Texaco Inc. | 3 | 3 | 4 | 3 | 4 | 4 |
| Standard of California | 4 | 4 | 3 | 4 | 5 | 5 |
| Standard Oil (Indiana) | 5 | 5 | 6 | 5 | 7 | 9 |
| Gulf Oil Corp. | 6 | 6 | 9 | 9 | 9 | 7 |
| Shell Oil Corp. | 7 | 7 | 7 | 8 | 13 | 12 |
| Atlantic Richfield Co. | 8 | 8 | 8 | 7 | 10 | 11 |
| Standard Oil Co. (Ohio) | 9 | 9 | 5 | 6 | 21 | 23 |
| Sun Co. | 10 | 10 | 10 | 14 | 17 | 18 |
| Phillips Petroleum Co. | 11 | 11 | 11 | 10 | 15 | 16 |
| Getty Corp. | 12 | 12 | 12 | 13 | 23 | 26 |
| Union Oil Co. of California | 13 | 13 | 13 | 15 | 27 | 28 |
| Amerada-Hess Corp. | 14 | 14 | 16 | 16 | 33 | 43 |
| Cities Service Co. | 15 | 15 | 22 | 17 | 39 | 44 |
| Marathon Oil Co. | 16 | 16 | 14 | 18 | 36 | 39 |
| Tenneco Oil Co. | 17 | 17 | 20 | 12 | 16 (c) | 17 (c) |
| Ashland Oil, Inc. (b) | 18 | 18 | 19 | 19 | 35 | 40 |
| Kerr-McGee Corp. | 19 | 19 | 17 | 21 | 101 | 105 |
| Diamond-Shamrock | 20 | 20 | 15 | 20 | 112 | 119 |
| Murphy Oil Corp. | 21 | 21 | 18 | 22 | 167 | 188 |
| American Petrofina Co. | 22 | 22 | 21 | 23 | 164 | 178 |

Note: Conoco has been dropped from this report because it was merged into DuPont Co. as a division in 1981.
(a) As ranked by Fortune's 500 leading companies, May, 1981; (b) Fiscal ends Sept. 30; (c) Corporate but includes Tenneco Oil as a division.
Source: NPN questionnaires, annual reports and Fortune.

## 1980-1979 Changes in Profits

| Industry Medians | % Increase |
|---|---|
| Petroleum refining | 25.4% |
| Mining, crude oil production | 45.4 |
| Metal manufacturing | −7.6 |
| Aerospace | 6.5 |
| Paper, fiber & wood products | −11.4 |
| Office equipment (inc. computers) | 14.2 |

(Petroleum refining ranked second in 1980 with its 25.4% increase; it ranked first in 1979 with a 78.3% increase.)

## Return on Sales

| Industry Medians | % Growth 1980 | 1979 |
|---|---|---|
| Mining, crude oil production | 9.2% | 8.7% |
| Pharmaceuticals | 9.1 | 8.9 |
| Tobacco | 7.9 | 7.7 |
| Measuring, scientific, photographic equipment | 6.9 | 6.9 |
| Broadcasting & motion pictures | 6.5 | 8.3 |
| Publishing, printing | 6.2 | 8.2 |
| Office equipment (inc. computers) | 6.0 | 7.0 |
| **All industries** | **4.8** | **5.2** |

(Petroleum refining ranked 9th with 5.5% in 1980, and 8th in 1978 with 6.6%.)

## Return on Stockholders' Equity

| Industry Medians | % Growth 1980 | 1979 |
|---|---|---|
| Mining, crude oil production | 21.0% | 16.7% |
| Tobacco | 19.8 | 18.4 |
| Petroleum refining | 19.4 | 19.1 |
| Broadcasting & motion pictures | 18.0 | 22.2 |
| Pharmaceuticals | 17.9 | 18.0 |
| Measuring, scientific, photographic equipment | 17.1 | 16.1 |
| **All industries** | **14.4** | **15.9** |

(Petroleum refining ranked 3rd in 1979.)

Source: Fortune 500 largest companies report, May, 1981.

# Oil Company Annual

| Company (b) | Gross Sales-Operating Revenues (a) | | | | Net Income | |
|---|---|---|---|---|---|---|
| | (Add 000) | | % Change | | (Add 000) | |
| | 1981 | 1980 | 1981 | 1980 vs. 1976 | 1981 | 1980 |
| Amerada Hess Corp. | $ 9,433,630 | $ 7,955,000 | 18.7% | 138.9% | $ 212,591 | $ 540,242 |
| American Petrofina | 2,504,038 | 2,098,464 | 19.3 | 133.9 | 74,140 | 104,279 |
| Ashland Oil (c) | 9,506,000 | 8,366,00 | 13.6 | 118.6 | 90,000 | 205,000 |
| Atlantic Richfield Co. | 28,208,000 | 24,156,000 | 16.8 | 233.3 | 1,671,000 | 1,651,000 |
| Cities Service Co. | 8,564,000 | 7,442,000 | 15.1 | 116.0 | (49,200) | 477,500 |
| Diamond Shamrock Corp. | 1,867,692 | 1,691,442 | 10.4 | 37.7 | 308,362 | 280,770 |
| Exxon Corp. | 115,148,321 | 110,380,629 | 4.3 | 139.3 | 5,567,500 | 5,650,100 |
| Getty Oil Corp. | 13,252,000 | 10,437,000 | 27.0 | 333.2 | 856,865 | 871,866 |
| Gulf Oil Corp. | 30,461,000 | 28,808,000 | 5.7 | 85.1 | 1,231,000 | 1,407,000 |
| Kerr-McGee Corp. | 3,826,400 | 3,477,900 | 10.0 | 95.9 | 211,117 | 182,223 |
| Marathon Oil Co. | 9,301,165 | 8,262,922 | 12.6 | 141.2 | 343,659 | 379,016 |
| Mobil Oil Corp. (d) | 64,488,000 | 59,510,000 | 8.4 | 178.9 | 2,433,000 | 2,813,000 |
| Murphy Oil Corp. | 2,446,823 | 1,966,722 | 24.4 | 148.2 | 163,006 | 150,447 |
| Phillips Petroleum Co. | 16,288,000 | 13,717,000 | 18.7 | 179.0 | 879,000 | 1,070,000 |
| Shell Oil Co. | 21,629,000 | 19,830,000 | 9.1 | 134.3 | 1,701,000 | 1,542,000 |
| Standard Oil Co. of California | 46,609,000 | 42,919,000 | 8.6 | 139.8 | 2,380,000 | 2,401,000 |
| Standard Oil Co. (Indiana) | 31,729,000 | 27,832,000 | 14.0 | 175.1 | 1,922,000 | 1,915,000 |
| Standard Oil Co. of Ohio | 13,810,000 | 11,346,000 | 21.7 | 373.6 | 1,947,000 | 1,811,224 |
| Sun Co. | 15,967,000 | 13,242,000 | 20.6 | 196.4 | 1,076,000 | 723,000 |
| Tenneco (e) | 15,462,000 | 13,226,000 | 16.9 | NA | 813,000 | 726,000 |
| Texaco, Inc. (f) | 57,628,000 | 51,196,000 | 12.6 | 117.9 | 2,310,000 | 2,240,000 |
| Union Oil Co. of California | 10,745,900 | 9,984,100 | 7.6 | 100.8 | 791,400 | 647,000 |

| Company | Product Imports b/d | | Crude Imports b/d | | Net Crude Production b/d | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Domestic | | Foreign | |
| | 1981 | 1980 | 1981 | 1980 | 1981 | 1980 | 1981 | 1980 |
| Amerada Hess Corp. | — | — | — | — | 82,357 | 88,305 | 73,745 | 101,899 |
| American Petrofina | — | 0 | 4,000 | 27,000 | 18,036 | 18,162 | — | — |
| Ashland Oil | — | — | 166,000 | 255,621 | 2,800 | 3,100 | 9,500 | 9,600 |
| Atlantic Richfield Co. | — | 500 | — | 158,500 | 539,900 | 555,700 | 32,800 | 33,600 |
| Cities Service Co. | 0 | 0 | NA | 71,698 | 149,100 | 154,700 | 30,100 | 32,100 |
| Diamond Shamrock Corp. | — | 0 | — | 1,615 | 30,287 | 29,730 | 33 | 39 |
| Exxon Corp. | NA | 280,800 | NA | 475,000 | 752,000 | 787,000 | 3,044,000 | 3,221,000 |
| Getty Oil Corp. | — | 0 | — | 111,800 | 277,700 | 271,000 | 145,900 | 145,400 |
| Gulf Oil Corp. | 21,600 | 16,400 | 245,700 | 332,000 | 345,400 | 364,200 | 263,400 | 279,800 |
| Kerr-McGee Corp. | — | — | NA | 59,811 | 33,827 | 32,613 | NA | 8,233 |
| Marathon Oil Co. | — | 0 | 167,000 | 215,000 | 165,874 | 168,275 | 64,912 | 116,521 |
| Mobil Oil Corp. | 10,000 | 12,000 | 136,000 | 293,000 | 316,000 | 318,000 | 274,000 | 466,000 |
| Murphy Oil Corp. | — | 245 | 26,671 | 42,353 | 13,992 | 18,032 | 47,577 | 41,651 |
| Phillips Petroleum Co. | — | — | — | 123,000 | 266,000 | 270,000 | 141,000 | 180,000 |
| Shell Oil Co. | — | 15,000 | 256,000 | 277,000 | 514,000 | 511,000 | 23,000 | 21,000 |
| Standard Oil Co. of California | NA | NA | NA | NA | 378,000 | 373,000 | 2,435,000 | 2,636,000 |
| Standard Oil Co. (Indiana) | NA | 19,000 | NA | 328,000 | 437,000 | 464,000 | 357,000 | 372,000 |
| Standard Oil Co. of Ohio | — | 2,734 | — | 260,171 | 717,291 | 715,784 | 0 | 0 |
| Sun Co. | — | — | — | — | 217,321 | 206,107 | 27,433 | 28,637 |
| Tenneco Oil Co. | — | — | — | — | 83,101 | 72,526 | NA | NA |
| Texaco, Inc. | — | — | — | — | 381,000 | 413,000 | 2,672,000 | 2,760,000 |
| Union Oil Co. of California | NA | NA | NA | 135,700 | 165,800 | 171,200 | 70,300 | 79,300 |

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(a) Excluding taxes.

(b) Clark Oil & Refining was acquired by Apex Oil Co. and Conoco Inc. was acquired by DuPont in 1981 and now are operating divisions instead of separate entities, thus current data are not comparable with past tables. Commonwealth Oil & Refining also was dropped from the 1981 report because of a paucity of data.

(c) Ashland's fiscal year ends 9/30.

# Reports for 1981

| Net Income | | Net Income as % of Gross Sales | | Total Assets | | | | Net Income as % of average stockholder equity | |
|---|---|---|---|---|---|---|---|---|---|
| % Change | | | | (Add 000) | | % Change | | | |
| 1981 | 1976 | 1981 | 1980 | 1981 | 1980 | 1981 vs 1980 | 1981 vs 1976 | 1981 | 1980 |
| -60.6% | 39.3% | 2.3% | 6.8% | 6,321,581 | 5,895,444 | 7.2% | 128.0% | 8.5% | 22.9% |
| -28.9 | 73.7 | 3.0 | 5.0 | 1,146,081 | 1,187,752 | 3.5 | 37.5 | 14.2 | 22.4 |
| -56.1 | (33.8) | 9.5 | 2.5 | 4,097,000 | 3,358,000 | 7.8 | 94.7 | 9.3 | 22.6 |
| 1.2 | 190.6 | 5.9 | 6.8 | 19,733,000 | 16,605,000 | 18.8 | 122.9 | 19.3 | 22.2 |
| — | — | — | 6.4 | 6,048,500 | 5,538,000 | 9.2 | 67.3 | — | 18.5 |
| 9.8 | 120.2 | 16.5 | 16.6 | 3,016,385 | 2,895,457 | 4.2 | 103.6 | 22.8 | 21.1 |
| -2.0 | 110.8 | 4.8 | 5.1 | 62,931,000 | 56,757,000 | 10.9 | 73.2 | 19.5 | 22.2 |
| -1.5 | 231.5 | 6.5 | 8.4 | 9,536,365 | 8,266,676 | 15.4 | 162.8 | 17.9 | 21.0 |
| -12.5 | 50.9 | 4.0 | 4.9 | 20,429,000 | 18,638,000 | 9.6 | 51.9 | 12.4 | 14.6 |
| 15.9 | 57.4 | 5.5 | 5.2 | 3,414,904 | 2,806,559 | 21.6 | 110.0 | 14.1 | 13.8 |
| -9.3 | 75.5 | 3.5 | 4.4 | 5,993,623 | 5,043,092 | 18.8 | 97.0 | 17.2 | 21.0 |
| -13.5 | 159.7 | 3.8 | 4.7 | 34,776,000 | 32,705,000 | 6.3 | 119.3 | 17.6 | 23.9 |
| 8.3 | 233.3 | 6.7 | 7.7 | 2,776,881 | 2,308,329 | 20.1 | 92.2 | 22.1 | 25.8 |
| -21.7 | 113.3 | 5.4 | 8.0 | 11,264,000 | 9,844,000 | 14.4 | 122.2 | 16.0 | 23.8 |
| 10.3 | 140.9 | 7.9 | 7.8 | 20,118,000 | 17,615,000 | 14.2 | 156.7 | 21.0 | 22.0 |
| -1.0 | 170.5 | 5.1 | 5.6 | 23,680,000 | 22,162,000 | 6.8 | 72.0 | 18.7 | 21.7 |
| — | 115.2 | 6.1 | 6.9 | 22,916,000 | 20,167,000 | 13.6 | 104.4 | 18.0 | 20.4 |
| 7.5 | 685.4 | 14.1 | 16.0 | 15,743,000 | 12,080,050 | 30.2 | 151.5 | 32.7 | 39.7 |
| 40.8 | 202.2 | 6.7 | 5.5 | 11,822,000 | 11,000,000 | 7.5 | 144.5 | 23.1 | 17.9 |
| 10.6 | — | 5.3 | 5.5 | 16,808,000 | 13,853,000 | 21.3 | — | 16.1 | 17.4 |
| 3.1 | 165.5 | 4.0 | 4.4 | 27,489,000 | 26,430,000 | 4.0 | 51.1 | 17.6 | 19.7 |
| 22.3 | 194.1 | 7.4 | 6.5 | 7,592,800 | 6,772,100 | 12.1 | 79.6 | 20.8 | 20.1 |

| Refinery Crude Runs b/d | | | | Total domestic production as % of total domestic runs | | Domestic refined petroleum product sales b/d | |
|---|---|---|---|---|---|---|---|
| Domestic | | Foreign | | | | | |
| 1981 | 1980 | 1981 | 1980 | 1981 | 1980 | 1981 | 1980 |
| 414,000 | 481,000 | — | — | 19.9% | 18.4% | 515,000 | 550,000 |
| 97,663 | 128,301 | — | — | 18.5 | 14.2 | 121,479 | 137,625 |
| 321,499 | 363,427 | — | — | 51.6 | 70.3 | 428,465 | 497,748 |
| 662,700 | 727,400 | — | 6,900 | 81.5 | 76.4 | 647,500 | 702,500 |
| 208,800 | 237,700 | — | — | 71.6 | 65.1 | 249,100 | 270,900 |
| 59,475 | 56,985 | — | — | 51.0 | 52.0 | 83,595 | 83,232 |
| 1,111,000 | 1,246,000 | 2,767,000 | 2,923,000 | 67.7 | 63.2 | 1,295,000 | 1,503,000 |
| 249,200 | 249,100 | 16,700 | 20,300 | 89.7 | 91.9 | 285,800 | 289,300 |
| 649,300 | 749,200 | 483,300 | 636,100 | 53.2 | 48.6 | 691,100 | 736,900 |
| 110,524 | 112,726 | — | — | 30.6 | 28.9 | 149,984 | 167,637 |
| 382,372 | 414,660 | 40,261 | 55,861 | 43.4 | 40.6 | 457,690 | 463,733 |
| 639,000 | 734,000 | 1,134,000 | 1,225,000 | 49.0 | 43.0 | 696,000 | 737,000 |
| 82,790 | 91,000 | 24,393 | 8,428 | 16.9 | 19.8 | 91,215 | 92,430 |
| 285,000 | 262,000 | — | — | 94.0 | 103.1 | 446,000 | 460,000 |
| 867,000 | 902,000 | — | — | 59.0 | 57.0 | 826,000 | 922,000 |
| 1,079,000 | 1,181,000 | 909,000 | 1,005,000 | 35.0 | 31.6 | 1,141,000 | 1,255,000 |
| 944,000 | 1,042,000 | NA | 160,000 | 39.2 | 44.5 | 831,000 | 957,000 |
| 362,012 | 400,900 | 0 | 0 | 198.1 | 178.5 | 378,430 | 414,510 |
| 382,709 | 438,927 | 76,678 | 78,841 | 56.8 | 47.0 | 477,388 | 543,679 |
| 98,836 | 91,311 | 142,034 | 125,899 | 84.0 | 29.1 | 142,034 | 125,899 |
| 836,000 | 902,000 | 1,375,000 | 1,631,000 | 45.6 | 45.8 | 901,000 | 980,000 |
| 372,400 | 391,500 | — | — | 44.5 | 43.7 | 365,300 | 421,700 |

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(d) Mobil's 1980 earnings exclude an extraordinary gain of $459-million.

(e) Tenneco's financial data are corporate, or which Tenneco Oil co. is only a part.

(f) Texaco's 1980 earnings exclude an extraordinary credit of $402-million.

Source: NPN questionnaire and oil company annual reports.

# Quarterly and Full Year Earnings—1981 vs. 1980

**(Add 000,000)**

| | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | Full Year 1981 | Full Year 1980 | % Change |
|---|---|---|---|---|---|---|---|
| Exxon Corp. | $1,600.0 | $1,825.0 | $1,075.0 | $1,065.0 | $5,565.0 | $5,650.0 | (1.5%) |
| Mobil Oil Corp. | 640.0 | 700.0 | 506.0 | 588.0 | 2,434.0 | 2,813.0 | (13.5) |
| Texaco Inc. | 658.0 | 555.7 | 589.7 | 507.0 | 2,310.4 | 2,240.0 | 3.0 |
| Standard Oil Co. of California | 666.0 | 616.0 | 527.0 | 571.0 | 2,380.0 | 2,400.0 | (1.0) |
| Standard Oil (Indiana) | 376.7 | 552.8 | 608.3 | 384.0 | 1,921.8 | 1,915.3 | — |
| Gulf Oil Corp. | 303.0 | 311.0 | 316.0 | 301.0 | 1,231.0 | 1,140.0 | 7.9 |
| Shell Oil Corp. | 361.0 | 410.0 | 471.0 | 458.0 | 1,700.0 | 1,500.0 | 13.3 |
| Atlantic Richfield Co. | 346.4 | 380.1 | 433.5 | 469.8 | 1,671.3 | 1,651.4 | 1.2 |
| Standard Oil Co. (Ohio) | 520.4 | 478.7 | 470.0 | 477.8 | 1,946.9 | 1,811.0 | 7.4 |
| Sun Co. | 120.0 | 298.0 | 210.0 | 488.0 | 1,076.0 | 723.0 | 48.8 |
| Phillips Petroleum Co. | 270.8 | 229.8 | 192.3 | 186.5 | 897.4 | 1,069.6 | (17.9) |
| Getty Corp. | 230.2 | 205.0 | 205.2 | 216.5 | 856.9 | 871.7 | (1.7) |
| Union Oil Co. of California | 154.4 | 207.9 | 193.0 | 236.0 | 791.4 | 647.0 | 22.3 |
| Amerada Hess Corp. | 174.5 | (53.7) | 43.6 | 48.2 | 212.6 | 540.2 | (60.6) |
| Cities Service Co. | 57.7 | 90.5 | 77.6 | (275.0) | (49.2) | 477.5 | — |
| Marathon Oil Co. | 69.8 | 86.6 | 146.6 | 40.1 | 341.3 | 379.0 | (9.5) |
| Ashland, Inc.* | 20.2 | 7.2 | 13.3 | 49.3 | 90.0 | 205.1 | (56.1) |
| Kerr-McGee Corp. | 43.4 | 51.4 | 50.3 | 66.0 | 211.1 | 182.2 | 15.9 |
| Diamond-Shamrock | 51.1 | (43.9) | 54.4 | 59.7 | 121.3 | 201.2 | (39.7) |
| Murphy Oil Corp. | 38.4 | 45.0 | 41.1 | 41.4 | 165.9 | 150.5 | 10.2 |
| American Petrofina | 20.0 | 15.3 | 21.7 | 17.0 | 74.1 | 104.3 | (29.0) |

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*Fiscal year ends 9/30

# How They Fared in 1980 vs. 1979

**(Add 000,000)**

| Company | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | Full Year 1980 | Full Year 1979 | % Change |
|---|---|---|---|---|---|---|---|
| Exxon Corp. | $1,925.0 | $1,030.0 | $1,355.0 | $1,350.0 | $5,660.0 | $4,295.0 | 31.8% |
| Texaco Inc. | 1,102.9 | 502.9 | 636.4 | 500.3 | 2,642.5 | 1,759.1 | 50.2 |
| Mobil Oil Corp | 1,381.0 | 688.0 | 721.0 | 565.0 | 3,228.0 | 2,007.0 | 60.8 |
| Standard Oil Co. of California | 627.0 | 535.0 | 624.0 | 615.0 | 2,400.0 | 1,785.0 | 34.5 |
| Gulf Oil Corp. | 389.0 | 470.0 | 244.0 | 304.0 | 1,410.0 | 1,320.0 | 6.8 |
| Standard Oil Co. (Ind.) | 576.0 | 488.2 | 448.9 | 402.0 | 1,915.3 | 1,506.6 | 27.1 |
| Atlantic Richfield Co. | 426.1 | 438.8 | 389.7 | 398.3 | 1,651.4 | 1,165.9 | 41.6 |
| Shell Oil Co. | 373.0 | 407.0 | 353.0 | 408.6 | 1,541.6 | 1,125.6 | 36.9 |
| Standard Oil Co. (Ohio) | 450.7 | 451.3 | 433.4 | 475.8 | 1,811.2 | 1,186.1 | 52.7 |
| Conoco, Inc. | 328.6 | 249.6 | 207.4 | 241.0 | 1,026.0 | 815.0 | 25.9 |
| Phillips Petroleum Co. | 388.6 | 214.8 | 283.4 | 287.0 | 1,070.0 | 891.0 | 20.1 |
| Sun Co. (a) | 251.3 | 247.0 | 194.9 | 29.6 | 772.0 | 699.9 | 10.4 |
| Union Oil Co. of California | 152.9 | 194.8 | 122.0 | 177.2 | 647.0 | 500.6 | 29.2 |
| Getty Oil Co. | 225.8 | 243.1 | 191.8 | 211.1 | 871.9 | 604.4 | 44.2 |
| Cities Service Co. | 170.1 | 107.0 | 92.6 | 107.8 | 477.5 | 347.5 | 37.4 |
| Marathon Oil Co. | 139.1 | 108.3 | 76.3 | 55.3 | 379.0 | 232.2 | 17.3 |
| Amerada Hess Corp. | 199.0 | 140.4 | 94.3 | 106.6 | 540.2 | 507.1 | 6.5 |
| Ashland Oil Co. (b) | 75.9 | 47.4 | 46.5 | 35.3 | 205.1 | 526.3 | (61.0) |
| Kerr-McGee Co. | 47.1 | 49.6 | 33.7 | 51.8 | 182.2 | 160.0 | 13.9 |
| Diamond-Shamrock Co. | 56.2 | 56.3 | 42.7 | 45.9 | 201.2 | 178.1 | 13.0 |
| Murphy Oil Corp. | 28.4 | 36.5 | 40.0 | 45.6 | 150.5 | 103.6 | 45.3 |
| American Petrofina, Inc. | 31.4 | 25.1 | 28.4 | 19.3 | 104.3 | 83.2 | 25.4 |

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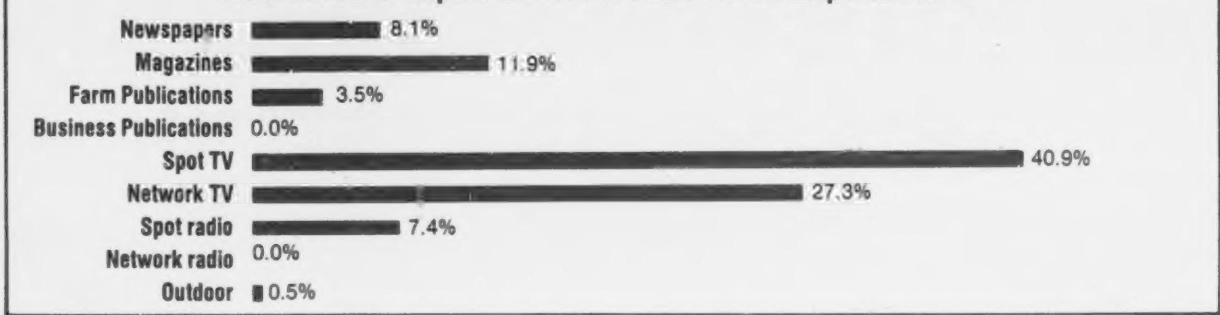
(a) Includes Sunmark & Sun Petroleum Products Co; (b) Fiscal ends 9/30.
Source: Annual Reports and NPN questionnaires.

# How Oil Spends Its Ad Money



How Three Companies Divide Their Media Expenditures

Source: Advertising Age, top 100 companies for 1979 and NPN estimates.

## How Three Top Oil Companies Split Their Budgets (a)

(Add 000)

| | Mobil (b) | | Exxon | | Shell | |
|---|---|---|---|---|---|---|
| | 1980 | 1979 | 1978 | 1977 | 1978 | 1977 |
| Newspapers | $ 5,923 | $ 5,775 | $ 1,958 | $ 1,822 | $ 751 | $ 644 |
| Magazines | 2,747 | 3,994 | 5,179 | 4,920 | 4,706 | 4,772 |
| Farm Publications | 1,915 | 1,995 | 188 | 120 | 2,000 | 2,225 |
| Business Publications | — | — | — | — | (c) | (c) |
| Spot TV | 33,118 | 36,932 | 6,804 | 3,820 | 3,491 | 2,657 |
| Network TV | 8,666 | 5,771 | 12,668 | 15,769 | 7,659 | 10,906 |
| Spot Radio | 2,873 | 2,183 | 4,022 | 2,392 | 947 | 338 |
| Network Radio | — | — | — | — | 36 | 635 |
| Outdoor | 135 | 148 | 442 | 328 | 2 | 44 |
| **Total Measured** | **$ 55,377** | **$ 56,740** | **$31,261** | **$29,171** | **$19,592** | **$22,224** |
| **Unmeasured** | **139,440** | **109,101** | **6,739** | **6,100** | **—** | **4,576** |
| **Total Estimated** | **$194,817** | **$165,841** | **$38,000** | **$35,271** | **$19,592** | **$26,800** |

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(a) Neither Exxon nor Shell made the list of the nation's top 100 advertisers in 1979 nor 1980; hence the only comparable data available are the 1978 figures for these two companies versus Mobil's 1980 data; (b) Mobil data includes Montgomery Ward and Container Corp. of America, which account for about 82% of the total advertising budget; (c) About $500,000 in business publications' advertising is included in the general magazine budget.

Source: Advertising Age, top 100 advertisers in 1980; Shell's budget for 1978 was estimated on an Ad Age basis.

## Network TV Investments

| Company | 1981 Spending (Add 000) | 1980 Spending (Add 000) | % Change |
|---|---|---|---|
| Exxon | $20,577 | $ 9,591 | 114.5% |
| Texaco | 12,016 | 11,631 | 3.3 |
| Phillips | 8,780 | 8,630 | 1.7 |
| Conoco | 7,075 | 5,110 | 38.5 |
| Shell | 6,145 | 7,689 | -19.6 |
| Pennzoil | 5,833 | 5,764 | 1.2 |
| Sun | 5,367 | 2,029 | 164.5 |
| Atlantic Richfield | 3,946 | 10,758 | -63.3 |
| Ashland | 3,190 | 3,123 | 2.1 |
| Quaker State | 3,068 | 3,108 | -1.3 |
| Witco (Kendall) | 820 | NA | — |
| Stand. of California | 227 | NA | — |
| Gulf | 205 | NA | — |

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Source: BAR, from Television Bureau of Advertising, April 1982.

## Spot TV Investments

| Company | 1981 Spending (Add 000) | 1980 Spending (Add 000) | % Change |
|---|---|---|---|
| Standard Oil (Ind.) | $11,631 | $8,080 | 43.9% |
| Gulf | 9,624 | 6,385 | 50.7 |
| Mobil | 8,993 | 3,291 | 173.3 |
| Standard Oil of Calif. | 8,518 | 5,558 | 53.3 |
| Shell | 7,416 | 3,558 | 108.4 |
| Exxon | 6,223 | 4,410 | 41.1 |
| Union Oil of Calif. | 4,291 | 2,497 | 71.8 |
| Texaco | 3,746 | 1,746 | 114.5 |
| Getty | 3,202 | NA | — |
| Burmah Oil | 2,856 | 2,223 | 28.5 |
| Pennzoil | 2,522 | 931 | 170.9 |
| Phillips | 2,092 | 980 | 113.5 |
| Ashland | 2,069 | NA | — |
| Quaker State | 2,054 | 1,524 | 34.8 |
| Sun | 1,799 | 1,796 | — |
| Atlantic Richfield | 746 | 3,297 | -77.4 |
| Witco (Kendall) | 681 | NA | — |
| Conoco | 429 | NA | — |

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Source: BAR, from Television Bureau of Advertising, April 1982.

# Current Automotive Registrations (a)

| | Automobiles | | | Trucks and Buses | | | All Motor Vehicles | | | Motorcycles |
|---|---|---|---|---|---|---|---|---|---|---|
| State | Registered 1980 | Estimated 1981 | % Inc. | Registered 1980 | Estimated 1981 | % Inc. | Registered 1980 | Estimated 1981 | % Inc. | Estimated 1981 |
| Alabama | 2,105,546 | 2,140,000 | 1.6% | 832,562 | 886,000 | 6.4% | 2,938,108 | 3,026,000 | 3.0% | 78,000 |
| Alaska | 156,000 | 158,000 | 1.3 | 99,000 | 101,000 | 2.0 | 255,000 | 259,000 | 1.6 | 8,000 |
| Arizona | 1,372,742 | 1,458,000 | 6.2 | 544,011 | 589,000 | 8.3 | 1,916,753 | 2,047,000 | 6.8 | 102,000 |
| Arkansas | 1,036,456 | 1,072,000 | 3.4 | 537,262 | 558,000 | 3.9 | 1,573,718 | 1,630,000 | 3.6 | 36,000 |
| California | 13,268,006 | 14,019,000 | 5.7 | 3,605,111 | 3,725,000 | 3.3 | 16,873,117 | 17,744,000 | 5.2 | 761,000 |
| Colorado | 1,739,718 | 1,765,000 | 1.5 | 602,575 | 605,000 | 0.4 | 2,342,293 | 2,370,000 | 1.2 | 115,000 |
| Connecticut | 1,984,064 | 2,022,000 | 1.9 | 163,431 | 167,000 | 2.2 | 2,147,495 | 2,189,000 | 1.9 | 75,000 |
| Delaware | 321,644 | 324,000 | 0.7 | 75,483 | 78,000 | 3.3 | 397,127 | 402,000 | 1.2 | 12,000 |
| Dist. of Col. | 247,137 | 257,000 | 4.0 | 20,428 | 22,000 | 7.7 | 267,565 | 279,000 | 4.3 | 5,000 |
| Florida | 6,196,637 | 6,398,000 | 3.2 | 1,416,902 | 1,484,000 | 4.7 | 7,613,539 | 7,882,000 | 3.5 | 222,000 |
| Georgia | 2,932,464 | 2,938,000 | 0.2 | 885,974 | 912,000 | 2.9 | 3,818,438 | 3,850,000 | 0.8 | 114,000 |
| Hawaii | 514,509 | 525,000 | 2.0 | 55,293 | 57,000 | 3.1 | 569,802 | 582,000 | 2.1 | 7,000 |
| Idaho | 513,256 | 531,000 | 3.5 | 320,812 | 330,000 | 2.9 | 834,068 | 861,000 | 3.2 | 61,000 |
| Illinois | 6,240,460 | 6,390,000 | 2.4 | 1,236,372 | 1,250,000 | 1.1 | 7,476,832 | 7,640,000 | 2.2 | 328,000 |
| Indiana | 2,872,006 | 2,900,000 | 1.0 | 953,846 | 959,000 | 0.5 | 3,825,852 | 3,859,000 | 0.9 | 190,000 |
| Iowa | 1,678,976 | 1,670,000 | −.4 | 650,489 | 661,000 | 1.6 | 2,329,465 | 2,331,000 | 0.1 | 233,000 |
| Kansas | 1,387,847 | 1,404,000 | 1.2 | 619,021 | 634,000 | 2.4 | 2,006,868 | 2,038,000 | 1.6 | 110,000 |
| Kentucky | 1,807,358 | 1,813,000 | 0.3 | 785,356 | 791,000 | 0.7 | 2,592,714 | 2,604,000 | 0.4 | 66,000 |
| Louisiana | 1,968,041 | 2,016,000 | 2.4 | 811,416 | 847,000 | 4.4 | 2,779,457 | 2,863,000 | 3.0 | 81,000 |
| Maine | 518,079 | 525,000 | 1.3 | 205,533 | 219,000 | 6.6 | 723,612 | 744,000 | 2.8 | 50,000 |
| Maryland | 2,345,047 | 2,393,000 | 2.0 | 457,849 | 464,000 | 1.3 | 2,802,896 | 2,857,000 | 1.9 | 84,000 |
| Massachusetts | 3,289,836 | 3,320,000 | 0.9 | 459,407 | 489,000 | 6.4 | 3,749,243 | 3,809,000 | 1.6 | 113,000 |
| Michigan | 5,246,057 | 5,326,000 | 1.5 | 1,242.013 | 1,256,000 | 1.1 | 6,488,070 | 6,582,000 | 1.4 | 258,000 |
| Minnesota | 2,314,444 | 2,345,000 | 1.3 | 776,682 | 797,000 | 2.6 | 3,091,126 | 3,142,000 | 1.6 | 171,000 |
| Mississippi | 1,219,147 | 1,269,000 | 4.1 | 357,627 | 366,000 | 2.3 | 1,576,774 | 1,635,000 | 3.7 | 30,000 |
| Missouri | 2,432,407 | 2,447,000 | 0.6 | 838,879 | 846,000 | 0.8 | 3,271,286 | 3,293,000 | 0.7 | 112,000 |
| Montana | 419,700 | 455,000 | 8.4 | 259,832 | 268,000 | 3.1 | 679,532 | 723,000 | 6.4 | 36,000 |
| Nebraska | 835,644 | 849,000 | 1.6 | 418,451 | 431,000 | 3.0 | 1,254,095 | 1,280,000 | 2.1 | 87,000 |
| Nevada | 471,593 | 492,000 | 4.3 | 183,074 | 195,000 | 6.5 | 654,667 | 687,000 | 4.9 | 21,000 |
| New Hampshire | 593,996 | 604,000 | 1.7 | 110,271 | 120,000 | 8.8 | 704,267 | 724,000 | 2.8 | 43,000 |
| New Jersey | 4,256,753 | 4,360,000 | 2.4 | 504,604 | 511,000 | 1.3 | 4,761,357 | 4,871,000 | 2.3 | 109,000 |
| New Mexico | 686,626 | 702,000 | 2.2 | 381,109 | 395,000 | 3.6 | 1,067,735 | 1,097,000 | 2.7 | 55,000 |
| New York | 6,994,316 | 6,978,000 | −.1 | 1,007,230 | 1,010,000 | 0.3 | 8,001,546 | 7,988,000 | −.1 | 218,000 |
| North Carolina | 3,395,784 | 3,421,000 | 0.7 | 1,136,064 | 1,196,000 | 5.3 | 4,531,848 | 4,617,000 | 1.9 | 122,000 |
| North Dakota | 364,909 | 370,000 | 1.4 | 262,023 | 268,000 | 2.3 | 626,932 | 638,000 | 1.8 | 32,000 |
| Ohio | 6,415,046 | 6,536,000 | 1.9 | 1,356,190 | 1,454,000 | 7.2 | 7,771,236 | 7,990,000 | 2.8 | 283,000 |
| Oklahoma | 1,807,643 | 1,844,000 | 2.0 | 875,356 | 885,000 | 1.1 | 2,682,999 | 2,729,000 | 1.7 | 133,000 |
| Oregon | 1,538,556 | 1,579,000 | 2.6 | 542,051 | 548,000 | 1.1 | 2,080,607 | 2,127,000 | 2.2 | 95,000 |
| Pennsylvania | 5,821,025 | 5,897,000 | 1.3 | 1,104,830 | 1,234,000 | 11.7 | 6,925,855 | 7,131,000 | 3.0 | 215,000 |
| Rhode Island | 542,462 | 557,000 | 2.7 | 80,466 | 83,000 | 3.1 | 622,928 | 640,000 | 2.7 | 27,000 |
| South Carolina | 1,533,081 | 1,541,000 | 0.5 | 462,912 | 479,000 | 3.5 | 1,995,993 | 2,020,000 | 1.2 | 43,000 |
| South Dakota | 369,549 | 371,000 | 0.4 | 231,692 | 237,000 | 2.3 | 601,241 | 608,000 | 1.1 | 38,000 |
| Tennessee | 2,584,551 | 2,597,000 | 1.3 | 706,794 | 738,000 | 4.4 | 3,271,345 | 3,335,000 | 1.9 | 85,000 |
| Texas | 7,484,817 | 7,606,000 | 1.6 | 2,989,999 | 3,161,000 | 6.4 | 10,474,816 | 10,787,000 | 3.0 | 331,000 |
| Utah | 678,027 | 682,000 | 0.6 | 314,468 | 318,000 | 1.1 | 992,495 | 1,000,000 | 0.8 | 65,000 |
| Vermont | 270,287 | 280,000 | 3.6 | 77,036 | 80,000 | 3.8 | 347,323 | 360,000 | 3.6 | 29,000 |
| Virginia | 3,071,878 | 3,137,000 | 2.1 | 554,402 | 567,000 | 2.3 | 3,626,280 | 3,704,000 | 2.1 | 91,000 |
| Washington | 2,293,521 | 2,344,000 | 2.2 | 931,741 | 962,000 | 3.2 | 3,225,262 | 3,306,000 | 2.5 | 153,000 |
| West Virginia | 928,962 | 976,000 | 5.3 | 390,953 | 406,000 | 3.8 | 1,319,915 | 1,384,000 | 4.9 | 43,000 |
| Wisconsin | 2,399,134 | 2,449,000 | 2.1 | 541,777 | 568,000 | 4.8 | 2,940,911 | 3,017,000 | 2.6 | 176,000 |
| Wyoming | 277,906 | 282,000 | 1.5 | 189,383 | 197,000 | 4.0 | 467,289 | 479,000 | 2.5 | 23,000 |
| **Total** | **121,723,650** | **124,336,000** | **2.1%** | **34,166,042** | **35,424,000** | **3.7%** | **155,889,692** | **159,760,000** | **2.5%** | **5,972,000** |

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(a) These estimates were made by the Federal Highway Administration on the basis of state reports of vehicle registrations in the early months of 1981 and information available on current trends, vehicle production, and other factors. They include both privately owned and publicly owned vehicles except those owned by the military services. Registrations shown for 1980 are from table MV-1, 1980.

# Estimated Licensed Drivers, By Sex and Population—1980

**Women drivers outnumber male** drivers in three states and in two others are so close that it will take only a modest increase to tilt them into the female column in 1981, according to Federal Highway Administration's annual statistical book.

States where distaff drivers predominate are Connecticut, New Mexico and Utah. States in the 50-50 category are Massachusetts and Oklahoma. For the nation as a whole, 53.13% of the registered drivers are men. Ohio leads them all with a male registration of 60.43%.

| State | Male Drivers | Female Drivers | Total Drivers | % Male Drivers | Per 1,000 Total Population | Per 1,000 Driving Age Population |
|---|---|---|---|---|---|---|
| Alabama | 1,190,787 | 1,080,706 | 2,271,493 | 52.42% | 584 | 769 |
| Alaska | 125,661 | 95,339 | 221,000 | 56.86 | 551 | 754 |
| Arizona | 1,049,638 | 883,683 | 1,933,321 | 54.29 | 711 | 933 |
| Arkansas | 732,150 | 706,550 | 1,468,700 | 51.89 | 642 | 842 |
| California | 8,324,839 | 7,343,892 | 15,668,731 | 53.13 | 662 | 846 |
| Colorado | 1,065,361 | 983,048 | 2,048,409 | 52.01 | 709 | 917 |
| Connecticut | 1,068,726 | 1,105,756 | 2,174,482 | 49.15 | 700 | 884 |
| Delaware | 215,615 | 201,847 | 417,462 | 51.65 | 702 | 902 |
| Dist. of Col. | 187,881 | 156,161 | 344,042 | 54.61 | 539 | 655 |
| Florida | 3,795,101 | 3,472,861 | 7,267,962 | 52.22 | 746 | 924 |
| Georgia | 1,788,088 | 1,635,581 | 3,423,669 | 52.23 | 627 | 828 |
| Hawaii | 301,569 | 239,974 | 541,543 | 55.69 | 561 | 733 |
| Idaho | 332,394 | 298,614 | 631,008 | 52.68 | 668 | 917 |
| Illinois | 3,723,113 | 3,279,436 | 7,002,549 | 53.17 | 613 | 795 |
| Indiana | 1,877,220 | 1,754,237 | 3,631,457 | 51.69 | 661 | 868 |
| Iowa | 1,108,044 | 998,564 | 2,106,608 | 52.60 | 723 | 937 |
| Kansas | 860,417 | 815,021 | 1,675,438 | 51.35 | 709 | 912 |
| Kentucky | 1,106,264 | 949,033 | 2,055,297 | 53.83 | 561 | 737 |
| Louisiana | 1,185,208 | 1,074,209 | 2,259,417 | 52.46 | 537 | 723 |
| Maine | 381,751 | 348,142 | 729,893 | 52.30 | 649 | 841 |
| Maryland | 1,427,068 | 1,294,541 | 2,721,609 | 52.43 | 646 | 826 |
| Massachusetts | 1,830,053 | 1,810,149 | 3,640,202 | 50.27 | 635 | 798 |
| Michigan | 3,340,992 | 3,059,008 | 6,400,000 | 52.20 | 691 | 908 |
| Minnesota | 1,221,802 | 1,114,133 | 2,335,935 | 52.30 | 573 | 744 |
| Mississippi | 856,792 | 730,219 | 1,587,011 | 53.99 | 630 | 853 |
| Missouri | 1,689,794 | 1,554,950 | 3,244,744 | 52.08 | 660 | 848 |
| Montana | 332,550 | 266,432 | 598,982 | 55.52 | 761 | 1,000 |
| Nebraska | 569,594 | 523,661 | 1,093,255 | 52.10 | 696 | 905 |
| Nevada | 334,082 | 291,591 | 625,673 | 53.40 | 783 | 999 |
| New Hampshire | 341,605 | 310,806 | 652,411 | 52.36 | 708 | 915 |
| New Jersey | 2,595,142 | 2,332,767 | 4,927,909 | 52.66 | 669 | 852 |
| New Mexico | 418,736 | 435,826 | 854,562 | 49.00 | 657 | 887 |
| New York | 5,186,731 | 4,053,328 | 9,240,059 | 56.13 | 526 | 668 |
| North Carolina | 1,963,049 | 1,814,018 | 3,777,067 | 51.97 | 643 | 832 |
| North Dakota | 220,698 | 198,060 | 418,758 | 52.70 | 641 | 841 |
| Ohio | 4,249,026 | 2,782,402 | 7,031,428 | 60.43 | 651 | 847 |
| Oklahoma | 994,578 | 970,571 | 1,965,149 | 50.61 | 650 | 843 |
| Oregon | 1,062,830 | 927,859 | 1,990,689 | 53.39 | 756 | 974 |
| Pennsylvania | 3,795,479 | 3,260,989 | 7,056,468 | 53.79 | 595 | 752 |
| Rhode Island | 305,037 | 281,600 | 586,637 | 52.00 | 619 | 777 |
| South Carolina | 1,024,420 | 928,410 | 1,952,830 | 52.46 | 626 | 827 |
| South Dakota | 252,236 | 228,542 | 480,778 | 52.46 | 697 | 916 |
| Tennessee | 1,462,791 | 1,346,864 | 2,809,655 | 52.06 | 612 | 793 |
| Texas | 4,882,888 | 4,404,938 | 9,287,826 | 52.57 | 653 | 867 |
| Utah | 422,302 | 422,415 | 844,717 | 49.99 | 578 | 846 |
| Vermont | 181,490 | 162,310 | 343,800 | 52.79 | 671 | 870 |
| Virginia | 1,765,461 | 1,695,225 | 3,460,686 | 51.01 | 647 | 830 |
| Washington | 1,409,882 | 1,252,776 | 2,662,658 | 52.95 | 645 | 831 |
| West Virginia | 854,459 | 651,942 | 1,506,401 | 56.72 | 773 | 1,008 |
| Wisconsin | 1,560,969 | 1,421,397 | 2,982,366 | 52.34 | 634 | 824 |
| Wyoming | 188,044 | 158,206 | 346,250 | 54.31 | 735 | 992 |
| **Total** | **77,190,407** | **68,108,589** | **145,298,996** | **53.13%** | **641** | **829** |

Source: Federal Highway Administration, Table DL-IA, September, 1981

# Passenger Cars: Oil, Automotive Trends

## Fuel and Oil Consumption

| Year | Avg. annual miles per car (a) | Avg. gal. gasoline (a) | Avg. miles per gal. (a) | M/O ratio (b) | Avg. qts. motor oil |
|---|---|---|---|---|---|
| **1981** | **9,000** | **563** | **16.0** | **.28** | **6.8** |
| 1980 | 9,135 | 603 | 15.2 | .25 | 6.5 |
| 1979 | 9,245 | 664 | 14.3 | .25 | 7.3 |
| 1978 | 10,046 | 715 | 14.1 | .28 | 7.6 |
| 1977 | 9,839 | 706 | 13.9 | .28 | 7.9 |
| 1976 | 9,763 | 711 | 13.7 | .28 | 8.0 |
| 1975 | 9,364 | 712 | 13.5 | .31 | 9.5 |
| 1974 | 9,448 | 704 | 13.4 | .31 | 9.5 |
| 1973 | 9,992 | 763 | 13.1 | .31 | 9.5 |
| 1972 | 10,184 | 755 | 13.5 | .33 | 10.0 |
| 1971 | 10,121 | 746 | 13.6 | .36 | 10.7 |
| 1970 | 9,978 | 735 | 13.6 | .41 | 12.0 |
| 1969 | 9,782 | 718 | 13.6 | .42 | 12.1 |
| 1965 | 9,387 | 667 | 14.1 | .63 | 16.8 |

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(a) 1965-1980 U.S. Department of Transportation; 1981 NPN estimate.
(b) Motor-oil ratio; the number of gal. of oil sold per 100 gal. of gasoline.

## U.S. Passenger-Car Compression Ratios

| Year | Weighted average (a) | Highest (b) | Lowest (b) |
|---|---|---|---|
| **1982** | **8.5** | **9.5** | **7.5** |
| 1981 | 8.3 | 9.0 | 7.5 |
| 1980 | 8.3 | 9.0 | 7.5 |
| 1979 | 8.3 | 9.0 | 7.5 |
| 1978 | 8.2 | 9.0 | 7.5 |
| 1977 | 8.2 | 9.0 | 7.5 |
| 1976 | 8.2 | 9.0 | 7.6 |
| 1975 | 8.2 | 9.0 | 7.6 |
| 1974 | 8.2 | 9.0 | 7.6 |
| 1973 | 8.3 | 9.0 | 7.6 |
| 1972 | 8.4 | 9.0 | 8.0 |
| 1971 | 8.7 | 10.7 | 8.0 |
| 1970 | 9.4 | 11.0 | 8.3 |
| 1969 | 9.5 | 11.0 | 8.3 |
| 1965 | 9.4 | 10.8 | 8.0 |

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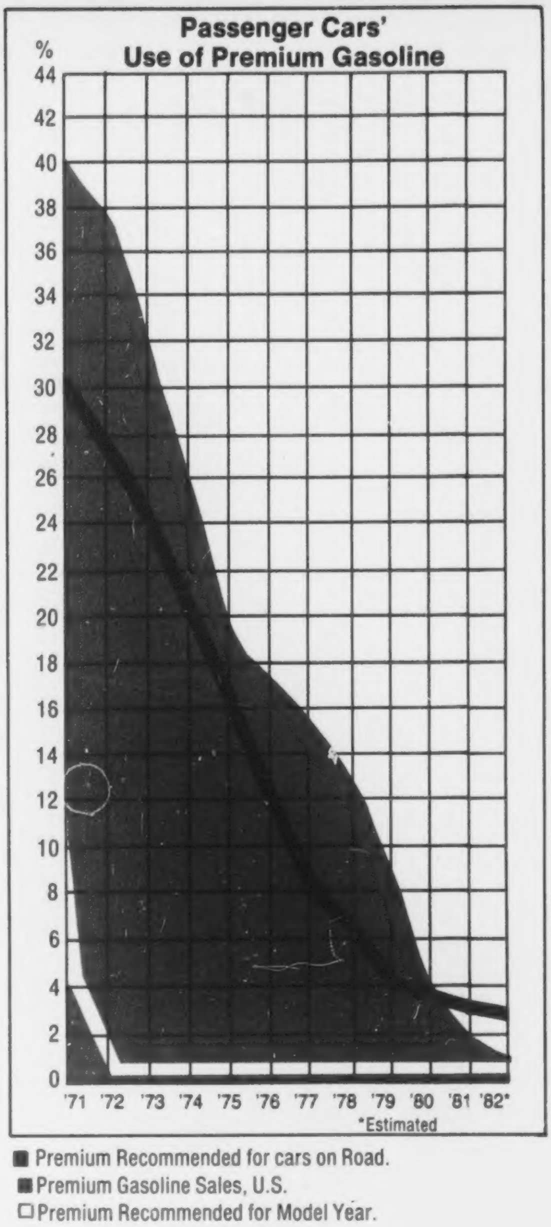
(a) Weighted average is based on production of automobiles of that model year. Production statistics have been used for all years except 1982 which are estimated.
(b) Highest and lowest compression ratios of standard (not optional) engines; excludes diesels.
Source: 1965-1974, Automotive-industry sources. 1975-82 NPN estimates.


Passenger Cars' Use of Premium Gasoline

## Vehicle Ownership by Households And Licensed Drivers

| Licensed Drivers | Motor Vehicle Ownership: One | Two | Three | Four + | Sub-Total | None | Distribution by Households (a) |
|---|---|---|---|---|---|---|---|
| One | 65.6% | 16.7% | 12.4% | 10.3% | 35.8% | 21.1% | 33.6% |
| Two | 29.8 | 73.1 | 47.5 | 36.1 | 50.0 | 3.1 | 42.6 |
| Three | 1.8 | 8.5 | 31.0 | 28.2 | 9.7 | 0.2 | 8.2 |
| Four + | 0.2 | 1.1 | 7.9 | 19.4 | 2.7 | 0.1 | 2.3 |
| Five + | — | 0.1 | 1.0 | 5.9 | 0.5 | — | 0.5 |
| All Drivers | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Distribution (a) by Households | 34.7% | 34.3% | 10.6% | 5.0% | 84.6% | 15.4% | 100.0% |

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(a) Based on 75.4-million households. Data compiled by Federal Highway Administration in the National Personal Transportation Study.
Source: FHA Highway Statistics 1979, Table NPTS-8, September, 1980.

## Passenger-Car Use of Premium

| Year | Premium Recommended: Model Year | Premium Recommended: Cars on Road (a) | Premium Sales |
|---|---|---|---|
| **1982** | **0** | **3.0%** | **1.0%** |
| 1981 | 0 | 3.0 | 1.4 |
| 1980 | 0 | 3.7 | 4.7 |
| 1979 | 0 | 4.5 | 8.3 |
| 1978 | 0 | 6.5 | 12.6 |
| 1977 | 0 | 8.9 | 14.8 |
| 1976 | 0 | 11.9 | 17.1 |
| 1975 | 0 | 15.9 | 19.0 |
| 1974 | 0 | 19.7 | 24.5 |
| 1972 | 0 | 27.1 | 38.1 |
| 1970 | 32 | 32.3 | 42.6 |

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(a) Weighted average based on all car registrations.
Source: Premium sales 1964-1975, Ethyl Corp.; 1976-1982 NPN estimates.

# Brand Names of Gasoline and Motor Oil

| Gasoline | Motor Oil | |
|---|---|---|
| **Ada Resources** | | |
| Philipps 66 (r, xr) | M&M Phillips 66<br>Sixty-Six<br>Trop-Artic | |
| **Agway Petroleum Corp.** | | |
| Agway (r, xr) | Agway | |
| **American Petrofina Marketing** | | |
| Fina Gasoline (r)<br>Fina Unleaded (xr, xp) | Fina Shield<br>Fina HD Premium<br>Fina Ultra Supreme 10W-40<br>Semi-Synthetic Fina 2001 5W-30 | |
| **Amos Post, Inc.** | | |
| Mobil (r) | Mobil<br>Chevron | |
| **Amoco Oil Co.** | | |
| Amoco Regular (r)<br>Amoco Premium (p)<br>Amoco (xr)<br>Amoco Premium Lead Free (xp) | Amoco 100<br>Amoco 200<br>Amoco 300<br>Amoco Multivis. | Commercial |
| | Amolube<br>Permalube<br>Amoco Multivis.<br>Amoco LDO | Reseller |
| **Apollo Oil Co.** | | |
| Apollo (r, p, sp, diesel) | | |
| **ARCO Petroleum Products Co.** | | |
| ARCO (r)<br>ARCO Supreme (p)<br>ARCO Clear (x)<br>ARCO Unleaded Supreme (xp) | ARCO<br>ARCO Plus<br>ARCO Supreme | |
| **Arkla Chemical Corp.** | | |
| Arkla Regular (r)<br>Arkla Premium (p)<br>Arkla No-Lead (xr) | Arkla Blue Chip<br>Arkla Royal Blue<br>Arkla Multi-Range<br>Super Express<br>Super Express 15W40 | |
| **Armour Oil Co.** | | |
| Gas N Save (r, p, sp)<br>Gas N Save (xr, xp, xsp) | Chevron | |
| **Asamera Oil (U.S.)** | | |
| Asamera (r) (x) (xp) | | |
| **Ashland Oil Co.** | | |
| Simas (r&p) (xr)<br>Ashland (r-p) (xr-xp) | | |
| **Atlantic Richfield Co.** | | |
| Arco (r)<br>Arco Supreme (xp)<br>Arco Clear (xr) | Arco<br>Arco Plus<br>Arco Supreme<br>Arco Graphite | |
| **Atlas Oil Co. of Utica** | | |
| Cities Service (r&xr)<br>Ashland Oil (p&xp)<br>Triangle (sp&xsp) | | |
| **Automatic Comfort Corp.** | | |
| Citgo (r, xr)<br>Texaco (r, xr)<br>Home Grown Fuel (xp) (†)<br>Sunoco (r, xr)<br>Mobile (r, xr) | Citgo<br>Sunlube<br>Texaco<br>Sunoco | |
| **Bagwell Oil Co.** | | |
| Union 76 (r, p) (x) | Union 76<br>Wolf's Head | |
| **Beacon Oil Co.** | | |
| Beacon (r, p, diesel) (xr, xp) | Sequoia<br>Beacon | |
| **Best Oil** | | |
| Best (r, xr)<br>Firepower (xp) | | |
| **Bi Rite Oil Co.** | | |
| Texaco (r, xr) | Texaco | |
| **Bonded Oil Co.** | | |
| Bonded (rx) (px) | Bonded Heavy Duty<br>Bonded All Weather | |
| **Bray Terminals** | | |
| Citgo (r) (p) (sp) (xr, xp, xsp) | Citgo<br>ARCO | |
| **Browning Oil Co.** | | |
| Shell (r, xr) (xp)<br>Rally (r, xr) (xp)† | Shell Motor Oil<br>X-100<br>Fire & Ice Multigrade | |
| **Burmah-Castrol (A)** | | |
| | Castrol Regular<br>Castrol Heavy Duty<br>Castrol CRF<br>Castrol "R" Racing Oil<br>Castrol Grand Prix Motorcycle<br>Castrol GP Racing<br>Castrol 10W-30, 20W-40<br>Castrol GTX, 10W-50, 10W-40, 20W-50 | |
| **Campbell Oil Co.** | | |
| Shell (r, sp) (xr, xsp) | Citco<br>Sunoco<br>Pennzoil<br>Shell<br>Valvoline | |
| **Cannon Oil Corp (A)** | | |
| Cannon (r&sp) (xr) | Cannon 20W-40<br>Cannon HD<br>Cannon Regular | |
| **Cel Oil Products Corp.** | | |
| Cel (r) (p) (sp) (xr, xsp, xp)<br>Gas Up (r, p, sp) (xr, xp, xsp) (†) | | |
| **CENEX** | | |
| Cenex (r&p) (xr) (xp)<br>Cenex Gasohol | Cenex Econex<br>Cenex<br>Cenex Multigrade<br>Cenex Superlube 518 | |
| **Central Petroleum Co. (A)** | | |
| | TracTruk Oil<br>TracTruk Super S-1<br>TrackTruk Super Mil-B<br>TrackTruk SE Service<br>Super Racing Oil<br>TracTruk S-3 Mil C | |
| **Certified Oil Co.** | | |
| Certified (r, xr) | Certified<br>Certified 10W-40 | |
| **Champlin Petroleum Co. (A)** | | |
| Champlin (r&xr)<br>Harbor (r&xr) (†) | Champlin Geo-XL<br>Champlin CMO<br>Champlin HIVI<br>Champlin S-3 Plus<br>Champlin Deluxe<br>Champlin TranSeason | |
| **Charter Marketing Co. (A)** | | |
| Super Test/Billups (r&p) (xr&xp)<br>Charter/DixieVim (r&p) (xr&xp) (†) | Your Friend<br>Billups Premium<br>Billups 10-W-40 | |
| **Cheker Oil Co.** | | |
| Cheker (r, xr) (xsp) | ND 20W30<br>HD Plus Imperial<br>Quaker State<br>Trop Artic 10W-40<br>Cheker 10W-40 | |
| **Chevron U.S.A.** | | |
| Chevron (r) (xr)<br>Chevron Supreme (p)<br>Calco (r&p) (xr) (†) | Chevron Delo 100<br>Chevron Delo 200<br>Chevron Special<br>Chevron Delo 300<br>Chevron Delo 400<br>Chevron Custom | |
| **Citadel Corp.** | | |
| Citadel (r, p, sp) (xr, xp, xsp) (diesel) | | |
| **Cities Service Oil Co.** | | |
| Citgo (r) (xr) (xp) | Citgo ND<br>Citgo C-300<br>Citgo HD<br>Citgo C-500<br>Citgo C515-40<br>Citgo All Season Multigrade 10W-30<br>Citgo All Season Multigrade 10W-40<br>Citgo Mileage Plus | |
| **Cloverleaf Service Stations (A)** | | |
| Peoples (r&p) (x)<br>Power (r&p) (x) (†) | Deep Rock Valu Lube<br>Deep Rock Special HD<br>Blue Velvet | |
| **Coen Oil Co.** | | |
| Amoco (r, xr, xsp) | Duplex<br>Allstar<br>Velviline<br>Kendall<br>Pennzoil<br>Amoco<br>Union<br>Quaker State | |
| **Colonial Oil Industries** | | |
| Eagle (r)<br>Colonial No Lead (xr) | Eagle Lube<br>Colonial Regular<br>Colonial Heavy Duty | |
| **Como Oil Co.** | | |
| Phillips (r) | Phillips | |
| **Consumers Inc. (A)** | | |
| Consumers (r&p)<br>Consumers Gasohol | Liquid Gold<br>Liquid Gold X HD | |
| **Conoco** | | |
| Conoco Regular (r) (xr)<br>Conoco Premium (xsp) | Par<br>Tracon<br>Tracon Supreme<br>Fleet<br>Fleet Supreme<br>Super Motor Oil<br>Super<br>New Generation All Season<br>DN600 Synthetic | |
| **Consumers Oil Corp.** | | |
| Citgo (r, xr)<br>Chevron (r, xr) (†) | Citgo<br>Chevron | |
| **Cook & Cooley** | | |
| Fire Chief (r) | | |
| **Cray Energy** | | |
| Citco (r, xp, xsp) | Citco<br>Shell<br>Texaco<br>Pennzoil | |
| **Crystal Flash Petroleum Corp. (A)** | | |
| Crystal Flash (r)<br>Super Flash (p)<br>Crystalhol (xp) | | |
| **Crystal USA, Oil Co.** | | |
| Crystal (r) | Saxon<br>Amalie | |
| **C.S.C. Oil Corp.** | | |
| C.S.C. (r) xr) (p) (xp) (sp, xsp) | | |
| **Curtis Oil Co.** | | |
| American (r)<br>Lead Free Amoco (xr)<br>Amoco Premium (xp) | Amolube<br>Amoco 200<br>Amoco 300<br>Amoco M-V<br>Super Premalube 100 | |
| **Dead River Co.** | | |
| Exxon (r, p, xr)<br>House Brand (r, xr) † | Motor Guard-Int. Lube<br>UniGuard<br>Exxon Extra<br>Exxon Uniflow | |
| **DeBlois Oil Co.** | | |
| Texaco (r, p, sp)<br>Texaco Super (xr, xp, xsp) | Texaco M.O.<br>Havoline | |
| **Delta Marketing Co.** | | |
| Red Ace (r&p) (xr)<br>Western (r&p) (xr)<br>Delta (r&p) (xr) | D.M.C. Non-Detergent<br>D.M.C. Heavy Duty<br>D.M.C. 10W-40 | |
| **Delta Refining Co. (A)** | | |
| Delta (r&p) (xr) | | |
| **Derby Refining Co. (A)** | | |
| Derby (r&p)<br>Star Kleen (r) (x) | Triumph<br>Super Flex<br>Ultra-Life<br>Premium E2 | |
| **Desert Petroleum** | | |
| Chevron (r, xr) | Chevron | |
| **Diamond Shamrock Corp.** | | |
| Trail Master (r)<br>Cloud Master (r)<br>Cloud Master II (xr) | LPG-NG<br>Boat'N Trail<br>Triple Action<br>Equa Flow | |

### Key

| | | |
|---|---|---|
| **Gasoline** | **(r)** | **Regular** |
| | **(x)** | **Unleaded** |
| | **(p)** | **Premium** |
| | **(sp)** | **Superpremium** |
| | **(†)** | **Secondary brand** |

(A) Most recent information available. No reply received from current questionnaire.
Source: NPN questionnaires.

| Gasoline | Motor Oil | |
|---|---|---|
| **Direct Oil Corp.** | | |
| Direct (r&p) (xr) | | |
| **Dixie Oil Co.** | | |
| Dixie (r&p)<br>Dixie (xp) | Dixie Thrift<br>Super Dixie | |
| **Dominion Oil Co.** | | |
| Dominion (r, p, sp) (xr, xp, xsp) | | |
| **Don Foster Oil Co. (A)** | | |
| Regular (r, xr) | Quaker Maid<br>Pennzoil<br>Sunoco<br>Mobil | |
| **Drake's Refinery Stations** | | |
| Drake's (r, p, sp) (xr, xp, xsp) | Royal Express<br>Quaker State<br>Pennzoil<br>Kendall | |
| **Eddy Refining Co. (A)** | | |
| Eddy Commercial Regular (sr)<br>Eddy Premium Regular (r) (x)<br>Eddy Ethyl (p) | | |
| **Elm City Filling Stations** | | |
| Elmco (r) (xr)<br>Elmco (*p)<br>Elmco (sp, xsp)<br>Nutmeg (r, xr) † | MacMillan Motor Oils | |
| **E.M. Bailey Distributing Co.** | | |
| | Chevron<br>Quaker State | |
| **Englefield Oil Co.** | | |
| Duke (r, p, sp) (xr, xp, xsp) | Duke | |
| **Etna Oil Co. (A)** | | |
| Etna Regular (r)<br>Etna Premium (p)<br>Etna Unleaded (xr) | Etna Premium<br>Etna HD<br>Etna ATF | |
| **Exxon Co., U.S.A.** | | |
| Exxon (r)<br>Exxon Unleaded (xr)<br>Exxon Extra (xp) | Oilex<br>Exxon Plus<br>Exxon Extra<br>Uniflo | |
| **Farm Stores** | | |
| Farm Stores (r, xr)<br>Farm Stores (xp) | | |
| **Farmland Industries** | | |
| Co-op (r) | Co-op Double Circle<br>Co-op Dual Season<br>Co-op Diesel Engine | |
| **FCX, Inc.** | | |
| Unico (r&p) (xr) | Unico | |
| **Fireline Petroleum** | | |
| Dis-gas (r, xr) (sp) | | |
| **Fisca Oil Co.** | | |
| Fisca (r)<br>Fisca (xr, xp) | Fisca HD<br>Fisca 10W-40 | |
| **Fleet-Wing Div., Pennzoil Co. (A)** | | |
| Fleet-Wing (r&p)<br>Fleet-Wing (sr) (x) | Piston Seal<br>MG<br>Super MG<br>MG 10W-30<br>Super MG 10W-40 | |
| **Fletcher Oil Co. (A)** | | |
| Veltex (r&x) | | |
| **Flying J Oil Co.** | | |
| Flying J (r&p) (xr)<br>Fastway (r&p) (xr) (†) | | |
| **Fortmeyer's, Inc. (A)** | | |
| Pennzoil (r) | Pennzoil | |
| **FS Services (A)** | | |
| FS Super Power (r) (xr) | FS Blue Circle<br>FS Super Lube<br>FS Low Ash<br>FS Multi-Range<br>FS Super Lube 15W-40 | |
| **Gas Pumpers of America Corp. (A)** | | |
| U-Save (r&p) (x) | | |
| **Gasco Gasoline** | | |
| Gasco (r, p, sp) (xr, xp, xsp)<br>Jiffy (r, p, sp) (xr, xp xsp) † | Gasco | |
| **Getty Refining & Marketing Co. (A)** | | |
| Getty Unleaded (xr)<br>Getty Premium (p)<br>Skelly Regular (r)<br>Surfco (r&p) (xr) (†) | Veedol Veelube<br>Veedol 10W-40<br>Getty Gold<br>Getty HDT<br>Getty HDS-3 | Eastern Region |
| | Skelly Ranger<br>Skelly HDT 100<br>Skelly Tagolene<br>Skelly Tagolene HD<br>Skelly HDT 300/400<br>Skelly Supreme<br>Skelly Supreme Plus | Central Region |
| **Giant Industries (A)** | | |
| Giant (r, xr, p) | | |
| **Golden Imperial** | | |
| Imperial Regular (r)<br>Imperial Leadfree (xr)<br>Imperial (p) | Lonestar | |
| **Great River Oil Co. (A)** | | |
| Great River (r)<br>GR Premium (xsp)<br>Oklahoma (r) (†)<br>Oklahoma Super Unleaded (xr) (†) | Great River<br>Quaker State<br>Pennzoil<br>Amoco Super Permalube<br>Amoco LDO | |
| **Gresham Petroleum Co. (A)** | | |
| Amoco (r, xr)<br>Amoco (xsp) | Amoco | |
| **Growmark, Inc. (A)** | | |
| FS Superpower (r, xr) | FS Blue Circle<br>FS Super Lube<br>FS Low Ash Engine Oil<br>FS Multi-Range<br>FS Super Lube 15W-40 | |
| **Gulf Oil Co., U.S.** | | |
| Good Gulf (r)<br>Gulf (sp)<br>diesel | Saphire<br>Gulflube<br>Gulf Pride<br>Gulf Pride Premium<br>Gulf Pride SP | |
| **Guttman Oil Co. (A)** | | |
| Texaco Fire Chief (r, xr)<br>Texaco (xsp)<br>Mobil (r, xr) | Lub-O-Lene<br>Valvoline<br>Texaco<br>Mobil<br>Kendall Non-Detergent<br>Pennzoil<br>Quaker State | |
| **Higgins Oil Co.** | | |
| Shell (r, p) (x)<br>Ashland (r, p, sp) † | Shell | |
| **Highway Oil (A)** | | |
| Highway (r) (xr)<br>Highway Gasohol<br>Highway Regohol | The Workingman's Friend | |
| **Hinkle Distributors** | | |
| Chevron (sr, r) | RPM<br>Zerolene<br>Chevron | |
| **Hi-Quality Lo-Cost Service Stations** | | |
| Hi-Quality Lo-Cost (r, xr, xp) | | |
| **Hop-In Food Stores** | | |
| Hop-In (r, xr, xp)<br>Hop-In Diesel | All Major Brands | |
| **Hornet Oil Co.** | | |
| Hornet (r&p) (xr) | | |
| **Hudson Oil Co. (A)** | | |
| Hudtane (sr)<br>Hudson Super Regular (r)<br>Hudson Premium (p)<br>Hudson Unleaded (xr) | Hud<br>Hudson Heavy Duty<br>Hudson Premium 10W-40<br>Hudson ATF | |
| **Hughes Oil Co.** | | |
| Mobil (r, xr, xsp)<br>Phillips 66 (r, xr) | Mobil<br>Phillips 66 | |
| **Hull Oil Co.** | | |
| Hull (r) (xr) | | |
| **Husky Oil Co.** | | |
| Husky (r, xr) | Husky Superlube<br>Husky HD<br>Husky HD Special<br>Husky Stratolube All Season<br>Husky Stratolube 10W-40 Long Distance | |
| **Imperial Florida Oil Co. (A)** | | |
| Imperial (r&p) (x) | Imperial HEP<br>Imperial Premium<br>Imperial AW | |
| **Imperial Refineries Corp. (A)** | | |
| Imperial (r&p) (xr) | HEP-Non-Detergent<br>Titan-ND<br>Imperial HD<br>Imperial 10/30 | |
| **J. & L. Oil (A)** | | |
| J & L Regular (r)<br>Golden Ethyl (p)<br>Blue Streak No Lead (xr) | J & L Special ND<br>J & L Certified HD<br>Certified 10W-40<br>J & L ATF | |
| **J. S. & J. Service** | | |
| Jimmys (r, p, sp) (xr, xp, xsp) | | |
| **Jones Oil Co.** | | |
| Sunlite (r, xr) | Diamond<br>Sunlube | |
| **Kalbab Industries (A)** | | |
| | Rev<br>Hygrade<br>Kalbab | |
| **Kelley-Williamson Co.** | | |
| Mobil (r, sp) | Mobil | |
| **Kent Oil Co.** | | |
| Unbranded | | |
| **Kerr-McGee Refining Corp. (A)** | | |
| K-M (r) (other x) | Kerr-McGee Valu Lube<br>Kerr-McGee HD<br>Kerr-McGee Special HD<br>Kerr-McGee Blue Velvet | |
| **Kickapoo Oil Co.** | | |
| Kickapoo (r) (xp) | | |
| **Kimber-Allen Petroleum Corp.** | | |
| Amoco<br>Citco<br>Getty | Amoco<br>Citco<br>Getty | |
| **Kimbro Oil** | | |
| Amoco (r, xr, xp, xsp) | Amolube<br>Amoco 20030<br>Amoco MV 10W30<br>Amoco LDO 10W40 | |
| **Kmoco Oil (A)** | | |
| Shell (r, x, p, sp)<br>Sun (r) (†) | Sun<br>Shell | |
| **Koch Marketing Co. (A)** | | |
| Regular (r)<br>Premium (p)<br>Unleaded (mg x) | Longlife Lube<br>High Performance 10W-40 | |
| **Krause General Oil Corp.** | | |
| Kerr McGee (r, xr)<br>Darby (r, xr) | Kerr McGee<br>Shell | |
| **Lake Shore Oil Co.** | | |
| Phillips 66 (r, xr) | Phillips | |
| **Land O'Lakes, Inc. (A)** | | |
| Felco (r&p) (x) | Felco Low Ash<br>Felco<br>Felco Super Clean | |
| **Lehigh Oil Co., Inc. (A)** | | |
| Lehigh (r) (xr) | Lehigh ND<br>Lehigh HD<br>Lehigh 10-40 | |
| **Liberty Petroleum Co. (A)** | | |
| Liberty (Blending Pumps 5 Grades)<br>Liberty (sr) (x) | Perfex<br>Perfex HD<br>Perfex All Season | |
| **Lido Co. of New England** | | |
| Amoco<br>Shell<br>Lido | Lido<br>Amoco<br>Shell | |
| **Macmillan Ring-Free Oil Co.** | | |
| | Royal Scot<br>Macmillan Ring-Free<br>Macmillan Ring-Free Premium | |
| **Main Bros. Oil Co.** | | |
| Citgo (r, p) (xr, xp) | Citgo | |
| **Malco Products** | | |
| Malco (r, xr, xp) | | |
| **Marathon Oil Co.** | | |
| Mile-Maker (r) (xr)<br>Super-M (xp) | Thoro Lube<br>VEP Heavy Duty<br>VEP All-Season 10W-30<br>Superior All Season<br>Ultra-D | |

# Brand Names (cont'd).

| Gasoline | Motor Oil |
|---|---|
| **Martin Oil Co. (A)** | |
| Martin (r&p)<br>Martin (mg) (x) | Martin Masterall<br>Martin Heavy Duty<br>Martin 10W-40 |
| **Martin Oil Service** | |
| Martin Regular (r)<br>Martin Premium (p)<br>Martin Unleaded (xr)<br>Martin Gasohol | Martin<br>Martin Heavy Duty<br>Martin All Season 10W-30, 10W-40 |
| **McDowell Oil Service, Inc.** | |
| ARCO (r, xr, xsp) | ARCO |
| **Meenan Oil Co., Inc.** | |
| Mobil (r, xr, p, xsp) | Mobil |
| **Merit Oil Corp.** | |
| Merit (r, xr, xp) | Merit (Economy)<br>Merit (Supreme) |
| **Merritt Truax, Inc.** | |
| Firechief (r)<br>Sky (xp)<br>Texaco (xsp) | |
| **M.F.A. Oil Co. (A)** | |
| MFA (r&p) (x) | MFA Sho-Me<br>MFA HD<br>MFA DS 3<br>MFS HD Special<br>MFA Super HD |
| **Mico Oil Co.** | |
| Mico (r, xr, xsp) | Fisca HD<br>Fisca 10-40 Premium |
| **Midland Cooperatives** | |
| Fire Power (r&p)<br>Fire Power (x) | Lanco<br>Midco<br>Golden D<br>Supreme |
| **Mid Missouri Oil Co.** | |
| Shell (r, xr, xsp)<br>Mid Mo Oil (r, xr) | Shell |
| **Midwest Oil Co. (A)** | |
| Midwest (r&p) (x) | Moco<br>Midwest Premium<br>Midwest Hi-Det<br>Midwest Hi-Det MF |
| **Miller Oil Co.** | |
| Hy-Flash (r, xr) | Kendall |
| **Miller & Holmes** | |
| M & H (r&p) (xr) | |
| **The Miller Oil Co.** | |
| Hy-Flash (r&p) (xr) | Kendall |
| **Mobil Oil Corp.** | |
| Mobil Regular (r)<br>Mobil Premium (p)<br>Mobil Unleaded (xr)<br>Mobil Super Unleaded (other) (x) | Mobil Regular<br>Mobil HD<br>Mobil Special<br>Mobil Super<br>Mobil 1 (Synthetic) |
| **Monarch Oil & Supply Co.** | |
| ARCO (r, xr, xsp) | ARCO 30<br>ARCO XHD<br>ARCO Plus<br>ARCO Supreme<br>ARCO Graphite |
| **Motorgas Oil & Refining Corp. (A)** | |
| Mogas (r&p) (x) | |
| **Murphy Oil Corp.** | |
| Spur (r) (xr, xp) | Spur Durable<br>Spur HD<br>Spur EMO Supreme |
| **Newell Oil Co.** | |
| Gulf (r, p, sp) (xr, xp, xsp) | Gulf |
| **R. B. Newman Fuel Corp.** | |
| Noco (r, xr, xp) | Mobil |
| **Old Colony Petroleum Co. (A)** | |
| Old Colony (r&p) (x) | Old Colony Standard<br>Old Colony HD<br>Old Colony 10-30<br>Old Colony 10-40 |
| **Orleans Oil Co. (A)** | |
| Orleans (r, xr) | Unique<br>MM<br>TropArtic Single G<br>TropArtic Multi G |
| **OWC Ltd. (A)** | |
| Racetrac (r&p) (x)<br>Raceway Oil Well (r&p) (x) (†) | |
| **Palm Oil Co. (A)** | |
| Palm (r, mg&p)<br>Palm (°r, °mg&°p)<br>Palm (xr, xmg&xp) | |
| **Peavey Oil Co.** | |
| Texaco (r, p, sp) (xr, xp, xsp) | Texaco<br>Havoline<br>Pennzoil |
| **Pennsylvania Petroleum Products Co. (A)** | |
| | Quaker City Economy<br>Quaker City Premium<br>Quaker City HD<br>Quaker City HD 10W-30<br>Quaker City HD 20W-50<br>Quaker City HD 10W-50<br>Quaker City Long Drain<br>Quaker City 15,000 Mile<br>Quaker City Outboard<br>Quaker City Racing<br>Quaker City Dexron<br>Quaker City Type F<br>Quaker City Type A<br>Brytol 10W-30, 10W-40, 10W-50, 20W-50<br>Rugby |
| **Pennzoil Co. (A)** | |
| Pennzoil (r&p)<br>Pennzoil (x) | Pennzoil Regular<br>Pennzoil Z-7<br>Pennzoil Multivis, W/Z-7<br>PZL Extended Life |
| **Penreco (A)** | |
| Penreco (x) (r&p) | |
| **Pester Corp. (A)** | |
| Pester (r) (xr)<br>Pester Super Bonus (mg)<br>Pester Gasohol | |
| **Petroleum Sales & Service** | |
| Amoco (r, xp, xsp) | Quaker State<br>Amoco |
| **Phillips Fuel Co.** | |
| Texaco (r) (xr) | Texaco<br>Havoland |
| **Phillips Petroleum Co.** | |
| Phillips 66 (r&p) (xr, xp) | Unique<br>MM<br>Trop-Artic |
| **Piasa Motor Fuels** | |
| Conoco (r) (xr, xp) | Conoco |
| **Pilot Oil Corp.** | |
| Pilot (r&p) (xr, xsp) | Pilot |
| **Pioneer Oil Co. (A)** | |
| | Quality Lube<br>Pioneer<br>Pioneer HD<br>Pioneer 10W-30<br>Pioneer 10W-40<br>Pioneer 10W-50 |
| **Port Oil** | |
| Port (r&p) (xr) (xp) | Port Regular<br>Port HD<br>Port 10W-40<br>Port Transmission |
| **Powerine Oil Co.** | |
| Powerine (r, p&xmg) | |
| **Power Test Corp.** | |
| Power Test (r&p) (xr) (xp) | Power Test<br>Power Test HD<br>Power Test All Weather<br>Power Test (Dexron) |
| **Pride Oil Co. (Miss.)** | |
| **Pride Oil Co., Inc. (Tenn.)** | |
| Tenneco (r, xr, xp) (diesel) | Kendall<br>Pennzoil<br>Quaker State<br>Havoline |
| **Publix Oil Co.** | |
| Publix (r) (xr) | |
| **W. H. Pugh Oil Co.** | |
| Peerless (r)<br>Clipper (p) | Peerless |
| **Quaker State Oil Ref. Corp.** | |
| Sterling (r) (xr) | Quaker State HD<br>Quaker State HDX Universal Fleet Oil<br>Quaker State Racing Oil<br>Quaker State Super Blend<br>Quaker State Deluxe<br>Quaker State Sterling |
| **Quality Oil Co.** | |
| Shell (r, xp, xsp) | Shell<br>Shell X-100<br>Fire & Ice 10W40 & 10W50 |
| **Racetrac Petroleum** | |
| Racetrac (r&p) (xr, xp)<br>Raceway (r&p) (xr, xp)† | |
| **Reinhardt Oil Corp.** | |
| Sun (r) (p, sp) (xr, xp, xsp)<br>Citgo (sr, xsr), (†) | Sun<br>Citgo |
| **Remote Services (A)** | |
| Convenient (r&p) (xr)<br>Petco (r, xr) (†) | |
| **Republic Oil Corp. (A)** | |
| Elcam (r)<br>Elcam Diesel<br>Dixxie Diesel (†) | |
| **Rex Oil Co. of Florida (A)** | |
| Rex (r&x) | |
| **Reynolds Industries** | |
| Port (r, xr, xp) | |
| **Rich Distributors (A)** | |
| Rich (r&p) (xsr) | |
| **River Oil Co.** | |
| Phillips (r, mg) | Phillips |
| **Rogers Oil Co.** | |
| Diamond (r&p) (xr) | |
| **Romaco** | |
| Thrifty (r, p, sp) (xr, xp, xsp)<br>Red Rock (r, p, sp) (xr, xp, xsp)† | |
| **Sahara Oil Co., Inc.** | |
| Texaco (r, xr, xsp)<br>Getty (r, xr, xsp)† | |
| **Santee Oil Co., Inc.** | |
| Shell (r, xr, sp) | Shell<br>Fire & Ice<br>X-100 |
| **Sav-Go Oil Co. (A)** | |
| Sav-Go (r, mg&p) (xr)<br>Swift (r, mg&p) (xr) (†) | |
| **Schaeffer Oil (A)** | |
| Mobil (r, xr)† | Rovel 10W-30<br>Rovel 10W-40 |
| **Sears Oil Co. (A)** | |
| Sears (r&p) (xr) | Sears Tri Pure<br>Sears Premium<br>Sears Supreme |
| **Seminole Asphalt Refining Co.** | |
| Seminole (r, xr) | |
| **Shay Oil Co. (A)** | |
| Exxon (r, xr)<br>Exxon (p) | Exxon |
| **Shelby Petroleum Corp.** | |
| Peer (r, p, sp) (xr, xp, sp)<br>Sail (r, p, sp) (xr, xp, sp)† | Bonus Regular<br>Sail Premium<br>Peer Improved Premium<br>Peer HD |
| **Shell Oil Co.** | |
| Shell (r)<br>Shell (xr)<br>Shell Super (xp)<br>East of Rockies | Shell Motor Oil<br>Shell X-100®<br>Shell Fire & Ice® |
| **The SICO Co.** | |
| Citgo (r, xr) (xp)<br>ARCO (r, xr) (†)<br>Texaco (r, xr) (†) | Citgo<br>ARCO<br>Valvoline<br>Texaco |
| **Sigmor Corp.** | |
| Shamrock (r&p) (xr) (xp)<br>Fill em Fast (r, xr, xsp)† | Genuine<br>Liberty |
| **Simon Oil Co.** | |
| Sunoco (r, xr)<br>Mobil | Sunoco<br>Mobil |
| **Sinclair Marketing (A)** | |
| Sinclair Dino (r)<br>Dino Supreme (p)<br>Sinclair Unleaded (x) | Dino Econoil<br>Dino Dinolene<br>Dino Supreme |
| **Sing Oil Co.** | |
| Sing (r, xr, p) | Sings Oil<br>Sing Select |

| Gasoline | Motor Oil |
|---|---|
| **Smith-Shafer Oil Co.** | |
| SS (r, xr, xp) | Quaker State |
| **SMO, Inc.** | |
| Texaco<br>B.P.<br>ARCO<br>Citgo<br>All grades | Texaco<br>B.P.<br>ARCO<br>Citgo |
| **South Central Oil Co. (A)** | |
| Premier/Freeway (r&p) (xr) | Premier/Freeway ND<br>Premier/Freeway HD<br>Premier/Freeway 10W-40 |
| **Southeastern Petroleum Sales Corp.** | |
| SOC (r) (xr) | |
| **Southern Counties Oil Co. (A)** | |
| ARCO (r, xr, xp)<br>SCOC (r, xr, p, sp)† | |
| **Speedway Petroleum Co. (A)** | |
| Speedway (r&p) (x) | Speedway Label |
| **Spencer Co.** | |
| American (r)<br>Amoco (xr, xsp)<br>Citgo (r, xr, xsp)† | Amoco<br>Citgo<br>Quaker State |
| **Standard Oil Co. (Indiana)** | |
| Amoco (r, p, xr, xp) | Amoco<br>Amolube<br>Amoco 100<br>Amoco 200<br>Amoco 300 |
| **Standard Oil Co. (Ohio)** | |
| Octron (r)<br>Catron (xp)<br>Wm. Penn (r&p) (xr)<br>Gas & Go (r, xr)† | Premex 10W-30<br>BP Extra Duty 10W-30<br>Nitrex MPG5W-40 |
| **J. D. Streett & Co.** | |
| Zephyr (r, xr, xp) (diesel)<br>Martin (x, xr, xp)† | Cardinal Outboard<br>Zephyr HPX SA<br>Zephyr Super Multipurpose<br>Zephyr SMP All Weather<br>Zephyr Super HD<br>Zephyr LMO |
| **Star Oil Co.** | |
| Shell (r, xr, xp) | Shell<br>Shell X-100<br>Shell Rotella<br>Shell Rimula<br>Shell Fire & Ice 10W40<br>Shell Fire & Ice 10W50 |
| **Suburban Propane Gas Corp.** | |
| (r, xr) | |
| **Sunmark** | |
| Sunoco (r)<br>Sunoco (xr, xp, xsp)<br>Sunlite (xr)<br>Circo (†)<br>Mascot (†)<br>Cam-2 (†)<br>Stop-'N-Go (r&p) (xr) (†) | Diamond<br>Sun Lube<br>Dynalube<br>Special<br>MPG Plus |
| **Sunland Ref. Corp. (A)** | |
| Sunland (r)<br>Sunland Ethyl (mg)<br>Sunland Imperial (p)<br>Unleaded (x) | Snow Crown<br>Dieseleze<br>Frictioneze<br>Multi-Service 303 |
| **Sunny Service Stations, Inc.** | |
| Sunny (r, p, sp, xr, xp, xsp) | Arrow<br>Valvoline<br>Havoline<br>Pennzoil |
| **Sunshine JR Stores** | |
| JR (r, xr, xp) | |
| **Tanner Oil Co.** | |
| Rich (r&p) (xr) | |
| **Taylor Oil Co.** | |
| Etna (r, xr, xp) | Etna HD<br>Etna 10W40 |
| **Tenneco Oil Co. (A)** | |
| Tenneco (r&p) (x)<br>Direct (r&p) (other x) (†)<br>Bay (r&p) (other x) (†)<br>Trust (mg) (†)<br>Caldor (mg) (†) | Shur-Lube<br>Tenneco Special Detergent<br>Tenneco ATF<br>Direct Premium<br>Tenneco Extra HD<br>Tenneco Four Seasons |
| **Terrible Herbst (A)** | |
| Terrible's Super (sp)<br>Terrible's Ethyl (other)<br>Terrible's Unleaded (other) (x) | |
| **Tesoro Petroleum Corp. (A)** | |
| Tesoro (r&p) (x) | |
| **Texaco Inc.** | |
| Fire Chief (r)<br>Lead Free (xr) (xp) | Texaco<br>Havoline<br>Havoline Supreme 10W-40 |
| **Texas City Refining, Inc. (A)** | |
| TCR (r&p) (x)<br>Rebel (r&p) (x) (†) | TCR |
| **Texas Star Oil Co.** | |
| Texas Star (r) (xr) | TSO<br>Superior |
| **Texstar Automotive Distribution Group (A)** | |
| | Penetrex<br>Quaker Maid |
| **Thornhill Oil Co., Inc.** | |
| Conoco (r, p, sp, xr, xp, xsp) | Conoco Par<br>Conoco Tracon<br>Conoco Super |
| **Thornton Oil Corp.** | |
| Thornton (r, p, sp) x) | Thornton |
| **Thrifty Oil Co. (A)** | |
| | Luballoy |
| **Thunderbird Petroleums (A)** | |
| Vista (r, mg&p)<br>Vista (*r, *mg&*p)<br>Vista (xr, xmg&xp)<br>Westland (r, mg&p) (†)<br>Westland (*r, *mg&*p) (†)<br>Westland (xr, xmg&xp) (†)<br>Westland (r&p) (xr) (†) | Itasca<br>Dura |
| **Tiona Petroleum Co. (A)** | |
| | Tiona Regular (ND)<br>Tiona Deluxe HD<br>Tiona Complete Fleet<br>Tiona Multivis<br>Tiona Multivis 10W-30, 20W-40<br>Tiona Multivis 10W-40 |
| **Tosco Corp. (A)** | |
| Lion (r&p) (xr)<br>Red Bird (r&p) (xr) (†) | Tiger<br>HDX<br>Naturalube Extra HD<br>Naturalube Super Duty<br>Naturalube Multi Temp |
| **Total Petroleum** | |
| Total (r, p, xr)<br>Vickers (r, xr, p) (†)<br>Best (r, xr, p) (†)<br>Apco (r&p) (xr) | APCO Defiance<br>Total Dura Lube<br>Vickers Big Value<br>Total Super HD<br>Vickers Golden Supreme<br>Total Superlube 10W30<br>Total 500<br>Vickers 10W40 |
| **Transit Oil Co. (A)** | |
| Transit (r, mg, p&sp) (x) | |
| **Travelers Petroleum** | |
| Self Way (r&p) (xr) (xp) | |
| **Tresler Oil Co.** | |
| Comet (r)<br>Supremium (p)<br>Comet No Lead (xmg) | TC 1-2-3 |
| **Tulsa Oil Corp. (A)** | |
| Tulsa (r) (x) | Gulf Coast |
| **UCO Oil Co. (A)** | |
| UCO (r, mg&p) (x) | |
| **Union Oil Co. of Calif.** | |
| Union 76 (r) (xr)<br>Union 76 Super (p) | Union Premium<br>Union Super<br>Union Long Distance Purple |
| **Union Texas Petroleum Div. of Allied Chemical Corp. (A)** | |
| Texgas (r&p) (x) | TMO<br>LPG<br>S-3<br>Top Torque<br>Omni<br>ATF |
| **United Refining Co. (A)** | |
| Keystone Powerfuel (r)<br>Keystone Powerlite (p)<br>Keystone Powerclean (xr) | Emblem<br>Powerlube |
| **U.S.A. Oil (A)** | |
| USA (r&p) (other x) | Saxon |
| **USA Petroleum Corp. (A)** | |
| USA (r&x)<br>USA (p) | Rival<br>USA Economy<br>USA Premium<br>USA All States |
| **Valvoline Oil Co. (A)** | |
| | Valvoline ND<br>Valvoline HD Super HPO<br>Valvoline HP Racing MO<br>Valvoline All-Fleet<br>Valvomatic Automatic Trans. Fluid<br>Valvoline All-Climate HD<br>Valvoline XLD |
| **Vickers Petroleum Corp. (A)** | |
| Vickers (r&p) (xr)<br>Vickers Gasohol | Vickers Big Value<br>Vickers Golden Supreme<br>Vickers 10W-40 |
| **Wake Up Oil Co.** | |
| Wake Up | |
| **Warelubco, Inc. (A)** | |
| Wareco (r&x)<br>Wareco Ethyl (p) | Wareco Premium<br>Wareco Plus<br>Wareco Super All Season |
| **Webaco Oil Co.** | |
| Citgo (r, xr, xp, p) | Citgo |
| **Webb Oil Co.** | |
| Rebel (xr) | |
| **Webster Oil Co.** | |
| Phillips (r, xr) | Unique<br>HDS<br>Super HD<br>TropArtic Single Grade<br>TropArtic 10-40 |
| **Wesson** | |
| Texaco (r, p, sp, xr, xp, xsp) | Texaco |
| **Western Farmers Assn. (A)** | |
| WFA (r&p) (xmg) | Co-op Regular<br>Co-op T-200<br>Co-op Double Circle<br>Co-op Dual Season<br>Co-op Diesel |
| **Western Marketing Inc. (A)** | |
| Conoco (r, xr)<br>Champlin (r, xr) (†) | Conoco<br>Mobil<br>Amolie<br>Exxon<br>Quaker State<br>Pennzoil |
| **Western Petroleum Co. (A)** | |
| Action (r&p) (x)<br>U-Pump-It (r&p) mg) (x) | |
| **Wickland Oil Co.** | |
| Regal (r, p) (xr) | Gold Shield |
| **A. T. Williams Oil Co. (A)** | |
| Wilco (r) (xr) | Wilco |
| **J. H. Williams Oil Co.** | |
| Union (r, xr) (p, xp) (sp, xsp) | Union Custom<br>Union HD<br>Union Premium<br>Union Super<br>Union 20W50<br>Union Long Distance Purple |
| **Witco Chemical Corp. (A)** | |
| | Kendall Dual Action<br>Kendall Superb<br>Kendall GT-1<br>Kendall F-L Select<br>Kendall Super-D III<br>(also makes and markets the following brand name)<br>Amalie HD-1<br>Amalie 1-2-3<br>Amalie Imperial<br>Amalie Pro |
| **Zephyr** | |
| Zephyr (r, xr, p, xp) | Zephyr Pride<br>Zephyr XLL |

## Trends in Service Station Activity

| | % Change in Total Marketing Expenditures | | New Stations | | Rehabilitations | | Self-Service | | Deactivation | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1982 | 1981 | 1982 | 1981 | 1982 | 1981 | 1982 | 1981 | 1982 | 1981 |
| Company A | 44.8%(a) | 170.9%(a) | — | — | — | — | — | — | — | — |
| Company B | −20.1 | −7.0 | 10 | 8 | 15 | 30 | 15 | 30 | 10 | 20 |
| Company C | −12.5 | −17.2 | — | — | — | — | — | — | — | — |
| Company D | 6.9 | 41.1 | — | — | — | — | — | — | — | — |
| Company E | 0.0 | 37.5 | — | — | — | — | — | — | — | — |
| Company F | NA | 42.0 | — | — | — | — | — | — | — | — |
| Company G | NA | 27.8 | — | — | — | — | — | — | — | — |
| Company H | NA | 2.1 | — | — | — | — | — | — | — | — |
| Company I | NA | 117.5 | — | — | — | — | — | — | — | — |
| Company J | −4.4 | −28.1 | — | — | — | — | — | — | — | — |

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(a) Mostly for vapor recovery equipment.

Source: NPN questionnaires, of which some were returned blank and unsigned.

## New Stations vs. Closed Stations

| | 1981 | 1980 | 1979 | 1978 | 1977 | 1976 | 1975 | 1974 | 1973 | 1972 |
|---|---|---|---|---|---|---|---|---|---|---|
| New Stations | 297 | 169 | 286 | 353 | 284 | 319 | 206 | 206 | 1,177 | 1,689 |
| Deactivated Stations | 4,273 | 3,380 | 3,724 | 5,138 | 5,683 | 5,676 | 4,127 | 6,041 | 9,342 | 3,498 |

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Note: All annual totals are based on reports from 28 companies except those of 1975 (25 companies) and 1974 (23 companies). Thus year to year comparisons cannot be made without weighting the totals.

Source: American Petroleum Institute, May, 1982.

# Service Station Construction Plans: Few Marketers Want to Talk About Them Now

**It was obvious in 1981** that many suppliers were revising marketing plans and strategies, but most were reluctant to say anything more than they absolutely had to, in public, that is.

Even a confidential NPN survey produced miminal results, as is indicated in the table at the top of this page. Of the questionnaires that were returned, most suppliers said they considered data on new stations, rehabs and deactivations proprietary information. This is in contrast to the past when many willingly talked about growth programs; in fact, were almost anxious to.

For some suppliers, the trend report above indicates a positive approach to marketing investment in 1981, with expenditures in the plus side over 1980. Of the two that gave 1982 forecasts, two were on the up side, two on the reduction side.

American Petroleum Institute's annual report on new stations versus closed stations showed an upsurge both in deactivations and new construction. Deactivations in 1981 were up 26% over 1980 and reflected the greatest number of closures since 1978. Deactivation, in the eyes of the API report, is closure of the facility and removal of all retailing equipment. It also confirms that the supplier has no intention of renewing operations there at any time in the foreseeable future.

Earlier this year, a McGraw-Hill economic survey commented on the petroleum industry's spending plans for 1982.

Noting that oil will have an 8.2% increase in 1982, it added: "That compares with annual gains of more than 25% in the past two years and, if realized, would be the smallest advance in petroleum capital spending since 1973 when outlays declined by some 2%. Since petroleum companies account for about 8% of all business' capital expenditures, a spending slowdown in this key industry weakens the overall capital spending picture.

The McGraw-Hill report also had this to say:

"Causes of the petroleum deceleration appear straightforward. For one thing, demand for refined products is way down, so much that refinery capacity stands idle. Moreover, conservation may have permanently cut demand for gasoline and home heating oil so even if the economy turns up soon it doesn't necessarily mean consumer demand for oil products will turn up as much."

# Capital Spending Slows Down in '81

**At the turn of the year,** capital spending plans by and for the oil industry were still on the bright side, although the hectic pace of recent years had slowed down a bit. But the continuing crude and product glut and further decreases in consumption, coupled with the economic recession that seemed to get worse in the first half of the new year, put all sorts of question marks on what really is going to happen to capital spending in 1982.

The near-collapse of foreign and domestic crude oil prices also had a depressing effect on the outlook for any more spending than is really necessary.

McGraw-Hill, Inc., whose year-end forecasts have been a traditional feature of NPN Factbooks, toned down the 1981 and 1982 projections it had made in early 1981, and looked at 1983 through more conservative eyes. Some of this cautiousness reflected the shrinking economy and some resulted from a change in its historic data.

Nevertheless, McGraw-Hill projected petroleum capital spending of $47.7-billion in 1981; $56.6-billion in 1982, an increase of 18.7%; and $61.1-billion in 1983, a further increase of 8.0%.

The publishing firm's economics department issued a caveat in its 1982-83 forecast, however. It said that it had recently reviewed all its projections of recent years, compared them with actual results, then revised its historical bases to bring the projections in line with reality.

This resulted in a diminution of all 1982 concepts and a reduction in the dollar and percentage totals in all functions of the petroleum industry. In addition, a spokesman noted, comparisons with data of the past are not possible because of this shift in the historical totals and relationships.

In the new projections for 1982 and 1983, oil marketing will not be doing badly in the capital spending pie though its total, $2.1-billion to $2.5-billion per year, is only a small part of the $48-billion to $61-billion oil companies will spend.

This forecast anticipates an expenditure of $2.1-billion on marketing facilities by the end of this year; $2.4-billion in 1982, an increase of 13.0%; and $2.5-billion in 1983, an increase of 8.4%.

On a three-year basis, then, this indicates that oil's marketing investments should top $7-billion. Although this may sound like an awful lot of money, it's just about the same level the industry has been maintaining since 1977-78, when inflation factors are considered.

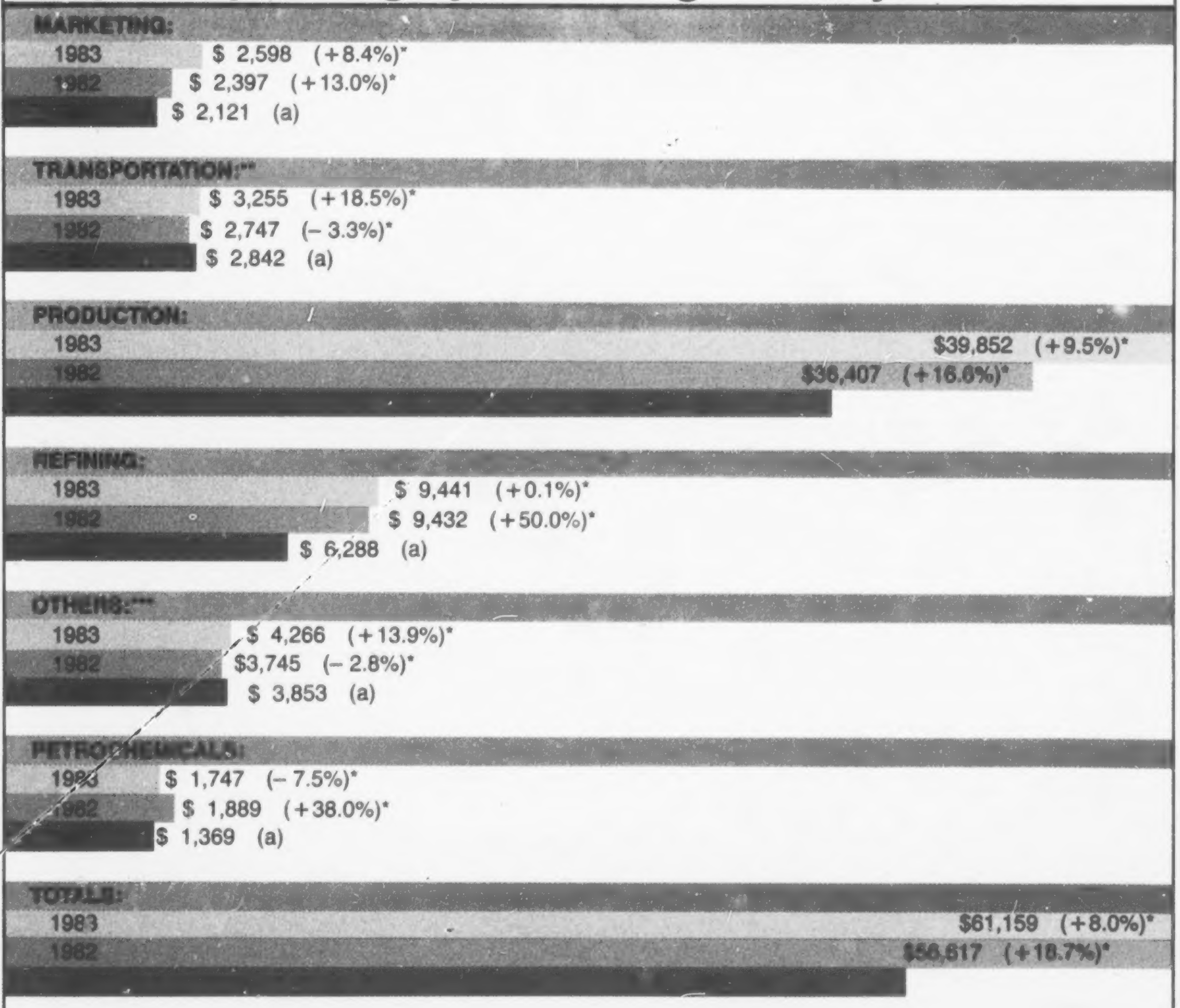
Most of this money is going into service-station modernization and construction, primarily the former; vapor recovery requirements, and other essential hardware.

It would appear, however, that these projections fall short of considering the burgeoning revolution in new equipment concepts, such as multi-product and overhead dispensers, computerization and microprocessors, and other hardware items that are now available.

McGraw-Hill says refining facilities will get capital programs exceeding $9.4-billion in 1982 and 1983, for a three-year total of $25-billion. This is the most that has been invested in refining in years. It is giving recognition to the need for more sophisticated equipment to meet the ever-spiraling demand for unleaded gasoline.

As is the tradition, exploration and production will get the lion's share of capital investments over the three years—a total of more than $100-billion. With total oil price deregulation in 1981, the returns on these investments are seen as the truly profitable activities the big companies can pursue. The incentives are in place.

## Capital Spending by Marketing Industry (Millions of Dollars)



*Figures in parentheses indicate percentage of change from previous year's total. **Includes only oil pipelines, not gas.
***Includes coal mining. (a) Comparisons with prior years cannot be made inasmuch as the projection bases from 1981 on were changed materially and cannot be related.

Source: McGraw-Hill Economics Department, Nov. 1981.

# How Oil Companies Handle

|  |  |  | BRANDED SERVICE STATIONS |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|
| MAJOR OIL COMPANIES | TOTAL BRANDED RETAIL OUTLETS* | TOTAL NUMBER OF STATES WHERE GASOLINE BRAND IS MARKETED† | Total branded service stations | Supplied directly | Supplied through jobbers and commission agents | Lessee dealer operated | Salary operated | Commission operated |
| Amoco Oil Co. | 20,061 | 46 | 19,712 | 6,789 | 12,923 | 19,585 | 127 | 0 |
| Atlantic Richfield Co. | 7,122 | 30 | 7,122 | 4,623 | 2,499 | NA | NA | NA |
| Chevron USA, Inc. | 12,748 | 39 | 7,924 | 6,145 | 1,779 | 7,828 | 96 | 0 |
| Exxon Co., USA | 20,585 | 40 | 20,585 | 8,668 | 11,917 | NA | NA | NA |
| Gulf Oil Co., U.S. | 13,870 | 30 | 13,870 | 6,232 | 7,638 | 13,221 | 649 | 0 |
| Mobil Oil Corp. | 16,564 | 45 | NA | NA | NA | NA | NA | NA |
| Shell Oil Co. | 13,665 | 36 | 5,764 | 5,764 | — | 5,709 | 55 | — |
| Texaco, Inc. | 22,490 | 50 | — | 5,403 | 15,968 | 21,139 | 5 | 227 |
| SEMI-MAJOR OIL COMPANIES |  |  |  |  |  |  |  |  |
| Ashland Petroleum Co. (xxx) | 271 | 8 | 271 | 271 | 0 | 271 | 0 | 0 |
| Cities Service Oil Co. | 5,784 | 31 | 5,510 | 455 | 5,055 | 105 | 350 | 0 |
| Conoco, Inc. | 4,885 | 28 | NA | — | — | — | — | — |
| Diamond Shamrock Corp. | 1,579 | 12 | 1,579 | 4 | 1,575 | 1,577 | 1 | 1 |
| Getty Refining & Marketing Co. | 4,700 | 28 | 4,700 | 2,955 | 1,745 | 4,443 | 257 | 0 |
| Kerr-McGee Refining Corp. (xxx) | 1,431 | 17 | 1,403 | 372 | 1,031 | 1,271 | 132 | 0 |
| Marathon Oil Co. | 2,146 | 6 | 2,122 | 576 | 1,546 | 456 | 0 | 0 |
| Murphy Oil Co. | 767 | 14 | 767 | 612 | 155 | 250 | 0 | 0 |
| Phillips Petroleum Co. | 12,327 | 38 | NA | — | — | — | — | — |
| Standard Oil Co. (Ohio) | 3,965 | 19 | 3,552 | 2299 | 1253 | —(R) | —(R) | —(R) |
| Sun Company, Inc. | 8,361 | 33 | 7,588 | 4,544 | 3,044 | 7,410 | 178 | — |
| Tenneco Oil Co. | 484 | 17 | 484 | 484 | — | 16 | 468 | — |
| Union Oil Co. of Calif. | 12,529 | 44 | 7,121 | 3,123 | 3998 | 2,461(U) | 62(U) | 0(V) |
| INDEPENDENT OIL COMPANIES AND SELECTED OIL JOBBERS |  |  |  |  |  |  |  |  |
| Ada Resources | 207 | 1 | 207 | 130 | 77 | 175 | 32 | — |
| Agway Petroleum Corp. | 283 | 9 | 264 | 264 | — | 129 | 133 | 2 |
| American Petrofina Marketing, Inc. | 4,014 | 20 | 3,211 | 0 | 3,211 | 0 | 0 | 0 |
| Amos Post, Inc. | 32 | 1 | 20 | 32 | 0 | 13 | 3 | 4 |
| Apollo Oil Co. | 13 | 1 | 13 | 13 | — | — | 13 | — |
| ARCO Petroleum Products Co. (A) | 7,122(E) | 30 | 7,122(E) | 4,623 | 2,499(E) | NA | NA | NA |
| Arkla Chemical Corp. | 7 | 3 | 4 | 4 | — | 6 | 1 | — |
| Armour Oil Co. | 34 | 11 | 34 | 25 | — | — | 34 | — |
| Asamera Oil, Inc. U.S. | 110 | 11 | 110 | 110 | — | 81 | 28 | 1 |
| Ashland Oil Co. of Calif. | 14 | 1 | 13 | 14 | — | 1 | 12 | 1 |
| Atlas Oil Co. of Utica, Inc. | 7 | 1 | 7 | 7 | 0 | 3 | — | — |
| Automatic Comfort Corp. | 54 | 1 | 34 | 34 | — | — | 24 | 10 |
| Bagwell Oil Co. (C) | 16 | 2 | 4 | 4 | — | 4 | — | — |
| Beacon Oil Co. | 267 | 2 | 260 | 119 | 141 | 67 | 52 | 141 |
| Best Oil, Inc. | 19 | 1 | 19 | 19 | — | — | 19 | — |
| Bi Rite Development | 21 | 1 | 21 | 21 | — | 21 | — | — |
| Bonded Oil | 247 | 4 | 247 | 247 | — | — | 247 | — |
| Bray Terminals, Inc. | 54 | 1 | 54 | 6 | 49 | 49 | 6 | — |
| Brennan Petroleum Products | 3 | 1 | 0 | — | — | — | — | — |
| Browning Oil Co. | 23 | 1 | 18 | — | — | 13 | 5 | — |
| Bursaw Oil Corp. (xxx) | 50 | 2 | NA | NA | NA | NA | NA | NA |
| By-Lo Oil Co. | 15 | 1 | 4 | 4 | 0 | 0 | 4 | 0 |
| Campbell Oil Co. | 55 | 1 | 40 | 40 | — | 40 | — | — |
| Cannon Oil Corp. | — | — | — | — | — | — | — | — |
| Caribou Four Corners | 60 | 10 | — | — | — | — | — | — |
| Cel Oil Products Corp. | 20 | 1 | 5 | 5 | — | 2 | 3 | — |
| CENEX | 1,001 | 11 | 950 | 950 | — | 915 | 35 | — |
| Certified Oil Co. | 215 | 3 | 215 | 215 | — | 180 | 35 | — |
| Champlin Petroleum Co. (xxx) | 863 | 18 | 445 | 445 | — | 72 | 369 | 4 |
| Charter Oil Co. | 430 | 12 | 430 | 430 | 0 | 0 | 430 | 0 |
| Cheker Oil Co. | 405 | 18 | 405 | 405 | — | 34 | 367 | 4 |
| Childress Oil Co. | 0 | — | — | — | — | — | — | — |
| Citadel Corp. | 11 | 3 | 11 | 11 | — | — | — | — |
| Coen Oil Co. | 300 | 3 | 275 | 275 | — | 274 | — | 1 |
| Colonial Oil Industries, Inc. | 465 | 6 | 465 | 216 | 249 | 390 | 75 | 0 |
| Como Oil Co. | 30 | 1 | 30 | 30 | — | 29 | 1 | — |
| Conna Corp. | 310 | 13 | 310 | 310 | — | — | 25 | 285 |
| Consumers Gasoline Stations | 34 | 2 | 34 | 34 | — | — | 34 | — |
| Consumers Oil Corp. | 16 | 2 | 8 | 8 | — | 7 | — | 1 |
| Cook & Cooley, Inc. | 85 | 1 | — | — | — | — | — | — |
| Cray Energy, Inc. | 47 | 3 | 43 | 43 | — | — | — | — |
| Crown Central Petroleum Corp. | 215 | 9 | 215 | 215 | 0 | 149 | 66 | 0 |
| Crystal Flash Petroleum (xxx) | 36 | 2 | NA | NA | NA | NA | NA | NA |
| Crystal USA Oil Co. | 177 | 9 | 177 | 177 | — | 177 | — | — |
| C.S.C. Oil Corp. | 23 | 2 | 23 | 23 | — | — | 23 | — |
| Curtis Oil Co., Inc. (xxx) | 47 | 1 | 21 | 16 | 5 | 21 | — | — |
| Dead River Co. | 135 | 2 | 50 | 50 | — | 48 | 0 | 2 |
| DeBlois Oil Co. | 43 | 2 | 37 | 37 | — | 18 | 16 | 3 |
| Delta Marketing Co. (xxx) | 252 | 9 | 228 | 228 | — | 36 | 92 | — |
| Derby Refining Co. | 550 | 12 | 550 | 130 | 520 | 39 | 91 | — |
| Desert Oil Co. | 6 | 1 | 6 | 6 | — | 6 | — | — |
| Desert Petroleum, Inc. (xxx) | 113 | 1 | 113 | 113 | — | — | 93 | 20 |
| Direct Oil Corp. (xxx) | 156 | 10 | — | — | — | — | — | — |
| Dividend Bonded Gas | 12 | 3 | 12 | 12 | — | — | 12 | — |
| Dixie Oil Co. | 97 | 3 | 97 | 97 | — | — | 97 | — |
| Dominion Oil Co. | 28 | 1 | 28 | 28 | — | 22 | — | 6 |

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(xxx) 1980 data: Company failed to respond to 1981 questionnaire.
(A) As of 12/21/81. Includes Prestige Stations, Inc.
(B) Company Operated.
(C) Includes Fulcher & Martin.
(D) Includes 4 gas, 3 fuel oil, 5 chemical.
(E) Estimated.
(F) Gasoline and distillates.
(G) Excluding two refineries.
(H) They are a Phillips Jobber.
(I) Most agents sell only propane.
(J) They are Jobbers.
(K) Percent.

# Product Distribution

| | | | BRANDED JOBBERS | | | | COMMISSION AGENTS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | NUMBER SELLING . . . | | | | NUMBER SELLING . . . | | |
| 100% full service | 100% self service | Service and self service | Total | Gasoline only | Fuel oil only | Gasoline & fuel oil | Total | Gasoline only | Fuel oil only | Gasoline & fuel oil |
| NA | NA | NA | 2,167 | NA | NA | 2,167 | 2 | NA | NA | —(Q) |
| NA | NA | NA | 252 | 252 | 0 | 0 | 0 | — | — | — |
| 4,079 | 190 | 3,665 | 689 | 386 | 113 | — | 200 | 0 | 0 | 200 |
| NA | NA | NA | 935 | 26 | 0 | 909 | 41 | 41 | — | — |
| 11,367(E) | 634 | 1,869 | 1,300(E) | NA | NA | NA | 142 | 0 | 0 | 142 |
| NA | NA | NA | 2,034 | 54 | 702 | 1,278 | 47 | — | — | 47 |
| 1,252 | 1,111 | 3,401 | 695 | 0 | 28 | 667 | 0 | — | — | — |
| NA | NA | NA | 1,365 | NA | NA | NA | 27 | NA | NA | NA |
| 255 | 0 | 16 | 34 | 4 | 0 | 30 | 170 | 0 | 0 | 170 |
| 138 | 290 | 27 | 221 | NA | NA | NA | 0 | — | — | — |
| — | — | — | 834 | NA | NA | NA | 0 | — | — | — |
| NA | NA | NA | 138 | — | — | 138 | 1 | 1 | — | — |
| 2,156 | 237 | 2,307 | 538 | 26 | 0 | 512 | 3 | 1 | 0 | 2 |
| 64 | 60 | 1,279 | 314 | 30 | 40 | 244 | 0 | 0 | 0 | 0 |
| 928 | 83 | 1,111 | 79 | 0 | 12 | 67 | 0 | — | — | — |
| 85 | 597 | 85 | 0 | — | — | — | 0 | — | — | — |
| — | — | — | 1,673 | NA | NA | NA | 3 | 2 | — | 1 |
| 1,117(S) | 386(S) | 796(S) | 132 | 26 | 2 | 104 | 196 | 196 | 0 | 0 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 9 | 443 | 32 | 25 | 25 | — | — | 3 | 3 | — | — |
| 3,476 | 610 | 3,035 | 620 | — | — | 620 | 193 | — | — | 193 |
| 175 | 32 | — | 19 | 19(F) | — | — | 3 | 3(F) | — | — |
| 6 | 256 | 2 | 31 | 5 | 3 | 23 | 2 | 2 | — | — |
| 1,577 | 700 | 934 | 445 | 378 | 0 | 67 | 0 | — | — | — |
| 10 | 3 | 7 | — | — | — | — | — | — | — | — |
| — | —(W) | — | NA | — | — | — | NA | — | — | — |
| NA | NA | NA | 252 | 252 | — | — | — | — | — | — |
| 3 | 4 | — | 3 | 0 | 0 | 3 | 0 | — | — | — |
| — | — | 34 | 0 | — | — | — | 0 | — | — | — |
| 0 | 100 | 10 | 0 | — | — | — | 0 | — | — | — |
| 1 | 13 | — | 0 | — | — | — | 0 | — | — | — |
| 7 | — | — | 0 | — | — | — | — | — | — | — |
| — | 34 | — | 0 | — | — | — | 10 | 10 | — | — |
| 4 | — | — | — | — | — | — | — | — | — | — |
| 47 | 193 | 20 | 141 | 141 | 0 | 0 | 0 | — | — | — |
| 4 | 15 | — | 0 | — | — | — | 0 | — | — | — |
| — | — | 21 | 0 | — | — | — | 0 | — | — | — |
| 48 | 197 | 2 | 0 | — | — | — | 0 | — | — | — |
| 54 | — | — | 87 | 12 | 75 | 87 | — | 0 | 0 | 0 |
| — | — | — | 0 | — | — | — | 0 | — | — | — |
| 2 | 1 | 15 | 0 | — | — | — | — | — | — | — |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| 4 | — | — | 0 | — | — | — | 0 | — | — | — |
| — | 20 | 20 | 0 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| 5 | — | — | 2 | — | — | 2 | 0 | — | — | — |
| — | 400 | 450 | 850 | — | — | 850 | 0 | — | — | — |
| 150 | 5 | 60 | 0 | — | — | — | 0 | — | — | — |
| NA | NA | NA | 304 | NA | NA | NA | 0 | — | — | — |
| 54 | 376 | 0 | 0 | — | — | — | 0 | — | — | — |
| 83 | 346 | 6 | 0 | — | — | — | 4 | — | — | 4 |
| — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 0 | — | — | — | 0 | — | — | — |
| 150 | — | 125 | 0 | — | — | — | 2 | — | — | 2 |
| 24 | 153 | 288 | 7 | 1 | 2 | 4 | 0 | — | — | — |
| 13 | 1 | 16 | —(H) | — | — | — | 0 | — | — | — |
| 9 | 301 | — | 0 | — | — | — | 0 | — | — | — |
| 23 | 11 | — | 0 | — | — | — | 0 | — | — | — |
| 8 | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| — | 43 | — | 0 | — | — | — | 1 | — | 1 | — |
| 60 | 29 | 126 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| — | — | — | 0 | — | — | — | 0 | — | — | — |
| 0 | 9 | 14 | 0 | — | — | — | 0 | — | — | — |
| 17 | — | 4 | 1 | — | — | 1 | 2 | — | — | 2 |
| 50 | 0 | 0 | 0 | — | — | — | 2 | 2 | — | — |
| 28 | 9 | — | 0 | — | — | — | 3 | 3 | 0 | 0 |
| 8 | 174 | 40 | 0 | — | — | — | 0 | — | — | — |
| 1 | 69 | 60 | 80 | — | — | 80 | 0 | — | — | — |
| 4 | — | 2 | 2 | 2 | — | — | — | — | — | — |
| — | 113 | — | 0 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| 7 | 2 | 3 | 0 | — | — | — | 0 | — | — | — |
| — | 50 | 40 | 90 | 50 | — | 40 | — | — | — | — |
| 5 | 17 | 6 | — | — | — | — | — | — | — | — |

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(L) Lease do not run.
(M) Majority of business not gasoline.
(N) Portion sell gasoline in Majik Div.
(O) 15 jointly owned.
(P) Owner dealer operated.
(Q) Almost all.
(R) Proprietary.
(S) Direct supplied stations only. Data not available for jobber supplied
(T) Confidential data.
(U) Non Lessee dealer—Ship Store PX—Jobber served non-dealer.
(V) Other, 4,598.
(W) Most.

| BULK PLANTS | | | | TERMINALS | | | | |
|---|---|---|---|---|---|---|---|---|
| | COMPANY OPERATED | | | | COMPANY OPERATED | | | |
| Total | Salary operated | Commission operated | Jobber operated bulk plants | Total | Salary operated | Commission operated | Jobber operated terminals | MAJOR OIL COMPANIES |
| 21 | 21 | 0 | 2,478 | 95 | 95 | 0 | 4 | **Amoco Oil Co.** |
| 0 | — | — | 0 | 52 | 52 | 0 | NA | **Atlantic Richfield Co.** |
| 170 | 12 | 158 | 500 | 119 | 118 | 1 | 14 | **Chevron USA, Inc.** |
| 39 | — | 39 | — | 83 | 83 | — | — | Exxon Co., USA |
| 160 | 18 | 142 | 1,245(E) | 97 | 97 | 0 | 0 | Gulf Oil Co. U.S. |
| 391(X) | 100 | 291 | 1,939 | 100 | 100 | 0 | 0 | Mobil Oil Corp. |
| 92 | 92 | — | 1,137 | 27 | 27 | — | — | **Shell Oil Co.** |
| 109 | 82 | 27 | 1,666 | NA | NA | NA | NA | **Texaco, Inc.** |
| | | | | | | | | SEMI-MAJOR OIL COMPANIES |
| 152 | 8 | 144 | 23 | 47 | 39 | 8 | NA | **Ashland Petroleum Co.** |
| 0 | — | — | 73 | 33 | 33 | — | NA | **Cities Service Oil Co.** |
| 0 | — | — | NA | 66 | — | — | NA | **Conoco, Inc.** |
| 0 | — | — | NA | 9 | 9 | — | 2 | Diamond Shamrock Corp. |
| 3 | 3 | 0 | 484 | 14 | 13 | 1 | 0 | Getty Refining & Marketing Co. |
| 0 | 0 | 0 | 90 | 3 | 3 | 0 | 1 | Kerr-McGee Refining Corp. |
| 1 | 1 | — | 1 | 49 | 49 | 0 | 0 | **Marathon Oil Co.** |
| 0 | — | — | 0 | 22 | 22(O) | 0 | 0 | **Murphy Oil Corp.** |
| 8 | 4 | 4 | 1,961 | 33 | 33 | — | 5 | **Phillips Petroleum Co.** |
| 101 | 0 | 101 | NA | 35 | 35 | 0 | 5 | Standard Oil Co. (Ohio) |
| NA | NA | NA | NA | 40 | 40 | — | NA | Sun Company, Inc. |
| 0 | — | — | 0 | 11 | 11 | — | 0 | Tenneco Oil Co. |
| 229 | 55 | 174 | 514 | 62 | 62 | — | 2 | **Union Oil Co. of Calif.** |
| | | | | | | | | INDEPENDENT OIL COMPANIES AND SELECTED OIL JOBBERS |
| 4 | 2 | 2 | 19 | 0 | — | — | 0 | **Ada Resources** |
| 129 | 129 | — | 28 | 12 | 12 | — | 0 | **Agway Petroleum Corp.** |
| 0 | — | — | 378 | 13(G) | 13 | 0 | 0 | **American Petrofina Marketing, Inc.** |
| 4 | 4 | — | — | 2 | 2 | 0 | — | Amos Post, Inc. |
| NA | — | — | NA | NA | — | — | NA | Apollo Oil Co. |
| 0 | — | — | 0 | 52 | 52 | 0 | NA | ARCO Petroleum Products Co. (A) |
| 3 | 3 | — | 3 | 0 | — | — | — | **Arkla Chemical Corp.** |
| 0 | — | — | 0 | 1 | 1 | — | 0 | **Armour Oil Co.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Asamera Oil, Inc. U.S.** |
| 0 | — | — | 0 | 0 | — | — | — | Ashland Oil Co. of Calif. |
| 0 | — | — | 0 | 1 | —(B) | — | 0 | Atlas Oil Co. of Utica, Inc. |
| 4 | — | — | 0 | 2 | — | — | 0 | Automatic Comfort Corp. |
| 1 | 1 | — | — | 1 | 1 | — | — | **Bagwell Oil Co.** |
| 0 | — | — | 7 | 0 | — | — | 0 | **Beacon Oil Co.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Best Oil, Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | Bi Rite Development |
| 1 | 1 | — | 0 | 0 | — | — | 0 | Bonded Oil |
| 2 | 2 | 0 | 5 | 2 | 2 | 0 | — | Bray Terminals, Inc. |
| 0 | — | — | 0 | 0 | — | — | — | **Brennan Petroleum Products** |
| 2 | 2 | — | 0 | 0 | — | — | 0 | **Browning Oil Co.** |
| NA | NA | NA | NA | NA | NA | NA | NA | **Bursaw Oil Corp.** |
| 1 | — | — | 0 | 0 | — | — | 0 | By-Lo Oil Co. |
| 3 | 3 | 0 | — | 0 | 0 | 0 | 0 | Campbell Oil Co. |
| — | — | — | — | — | — | — | — | Cannon Oil Corp. |
| — | — | — | — | — | — | — | — | **Caribou Four Corners** |
| 1 | — | — | — | 0 | — | — | — | **Cel Oil Products Corp.** |
| 35 | 35 | — | 815 | 7 | 7 | — | 0 | **CENEX** |
| 0 | — | — | 0 | 0 | — | — | 0 | Certified Oil Co. |
| 0 | — | — | NA | 6 | 6 | — | NA | Champlin Petroleum Co. (xxx) |
| 0 | — | — | 0 | 12(D) | 4 | 0 | — | Charter Oil Co |
| 0 | — | — | — | 0 | — | — | — | **Cheker Oil Co** |
| — | — | — | — | — | — | — | — | **Childress Oil Co** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Citadel Cor** |
| 2 | 2 | 0 | — | 0 | — | — | — | Coen Oil C |
| 2 | 2 | 0 | 8 | 2 | 2 | — | — | Colonial Oil Industries, In |
| 1 | — | — | — | 0 | — | — | — | Como Oil C |
| 0 | — | — | — | 0 | — | — | — | **Conna Co** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Consumers Gasoline Statio** |
| — | — | — | — | 1 | 1 | — | — | **Consumers Oil Co** |
| — | — | — | — | — | — | — | — | Cook & Cooley, I |
| 8 | 8 | — | 0 | 0 | — | — | 0 | Cray Energy, I |
| 0 | 0 | 0 | 0 | 11 | 11 | 0 | 0 | Crown Central Petroleum Co |
| NA | NA | NA | NA | NA | NA | NA | NA | **Crystal Flash Petroleum** |
| 0 | — | — | — | 0 | — | — | — | **Crystal USA Oil Co.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **C.S.C. Oil Corp.** |
| 3 | 1 | 2 | 1 | 0 | — | — | — | Curtis Oil Co., Inc |
| 17 | 17 | — | NA | 1 | 1 | — | NA | Dead River Co |
| 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | DeBlois Oil Co |
| 0 | — | — | 0 | 0 | — | — | — | **Delta Marketing Co** |
| 0 | — | — | 0 | 0 | — | — | — | **Derby Refining Co** |
| 2 | 2 | — | — | — | — | — | — | **Desert Oil Co** |
| NA | — | — | — | — | NA | — | — | Desert Petroleum, Inc |
| — | — | — | — | — | — | — | — | Direct Oil Corp |
| 0 | — | — | 0 | 0 | — | — | 0 | Dividend Bonded Ga |
| — | — | — | — | 0 | — | — | — | **Dixie Oil Co** |
| 2 | — | — | — | — | — | — | — | **Dominion Oil Co** |

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(X) Total wholesale distributing plants, including terminals.

(*) Total branded retail outlets includes garages, motels, c-stores and service stations. By U.S. Census Bureau definition, only establishments earning 50% or more of their income from the sale petroleum products are service stations.

(†) Total number of states where gasoline is branded includes District of Columbia.

Source: NPN questionnaires.

# How Oil Companies Handle

| INDEPENDENT OIL COMPANIES AND SELECTED OIL JOBBERS | TOTAL BRANDED RETAIL OUTLETS* | TOTAL NUMBER OF STATES WHERE GASOLINE BRAND IS MARKETED† | BRANDED SERVICE STATIONS | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | Total branded service stations | Supplied directly | Supplied through jobbers and commission agents | Lessee dealer operated | Salary operated | Commission operated |
| **Don Foster Oil Co. (xxx)** | **46** | **1** | **17** | **17** | **—** | **10** | **7** | **—** |
| **Drake's Refinery Stations, Inc.** | **14** | **1** | **14** | **14** | **—** | **—** | **14** | **—** |
| **East Coast Oil Corp.** | **30** | **1** | **30** | **30** | **—** | **—** | **30** | **—** |
| Elm City Filling Stations, Inc. | 60 | 1 | 60 | 60 | — | 51 | 8 | 1 |
| E. M. Bailey Dist. Co. (xxx) | 135 | 2 | 135 | 81 | 54 | 92 | 6 | 37 |
| Englefield Oil Co. | 134 | 2 | 134 | 134 | — | 96 | 38 | — |
| **Farm Stores, Inc.** | **60** | **1** | **—** | **—** | **—** | **—** | **—** | **—** |
| **Farmland Industries, Inc.** | **930** | **11** | **930** | **—** | **—** | **—** | **—** | **—** |
| **FCX, Inc.** | **106** | **2** | **0** | **—** | **—** | **—** | **—** | **—** |
| Fireline Petroleum | 407 | 10 | 0 | — | — | — | — | — |
| Fisca Oil Co., Inc. | 104 | 23 | 104 | 104 | — | — | 104 | — |
| Flying J, Inc. | 86 | 9 | 68 | 71 | — | — | 63 | 8 |
| **Don Foster Oil Co.** | **39** | **1** | **39** | **39** | **0** | **31** | **8** | **—** |
| **Franks Oil Co.** | **104** | **3** | **104** | **104** | **—** | **—** | **104** | **—** |
| **Gas-N-Go, Inc.** | **1** | **1** | **1** | **1** | **—** | **0** | **—** | **—** |
| Gasco Gasoline | 134 | 1 | 134 | 134 | — | 23 | 91 | 20 |
| General Oil Co. | 54 | 2 | 54 | 54 | — | — | 40 | 14 |
| Giant Industries, Inc. (xxx) | 20 | 3 | 20 | 20 | — | — | 20 | — |
| **Globe Oil Co., USA (xxx)** | **59** | **4** | **59** | **58** | **1** | **—** | **59** | **—** |
| **Golden Imperial, Inc.** | **47** | **1** | **47** | **47** | **—** | **—** | **47** | **—** |
| **Golub Service Station** | **15** | **2** | **15** | **14** | **1** | **—** | **15** | **—** |
| Great River Oil Co. (xxx) | 88 | 2 | 86 | 88 | — | 88 | — | — |
| Gresham Petroleum Co. | 15 | 1 | 4 | 4 | — | 2 | 2 | — |
| Growmark, Inc. (xxx) | 160 | 4 | 133 | 0 | 133 | 70 | 30 | 33 |
| **Guttman Oil Co. (xxx)** | **75** | **3** | **75** | **75** | **—** | **—** | **—** | **—** |
| **Harrell Petroleum Co.** | **27** | **1** | **16** | **—** | **—** | **9** | **6** | **1** |
| **Harris Enterprises, Inc.** | **41** | **2** | **40** | **40** | **—** | **6** | **22** | **12** |
| Heathwood Oil Co. | 1,000 | 2 | — | — | — | — | — | — |
| Higgens Oil Co., Inc. | 22 | 1 | 6 | 6 | — | 5 | — | 1 |
| Highway Oil, Inc. (xxx) | 223 | 26 | 223 | 174 | 49 | — | 223 | — |
| **Angus J. Hines, Inc.** | **103** | **1** | **103** | **103** | **—** | **24** | **21** | **17** |
| **Hi-Quality Lo-Cost Svc. Stations, Inc.** | **18** | **1** | **18** | **18** | **—** | **—** | **18** | **—** |
| **Holland Oil Co.** | **60** | **1** | **38** | **32** | **6** | **38** | **—** | **—** |
| Hop-In Food Stores, Inc. | 134 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Hudson Oil Co. (xxx) | 205 | 29 | 305 | 305 | 0 | 0 | 305 | 0 |
| Hughes Oil Co. | 123 | 2 | 123 | 123 | — | 50 | 1 | 62 |
| **Hull Oil Co.** | **15** | **2** | **15** | **15** | **—** | **—** | **10** | **5** |
| **Husky Oil Co.** | **562** | **17** | **562** | **45(K)** | **55(K)** | **562** | **0** | **0** |
| **J & L Oil, Inc.** | **90** | **6** | **79** | **79** | **—** | **6** | **73** | **—** |
| J. S. & J. Service, Inc. | 20 | 2 | 16 | 16 | — | — | 16 | — |
| Johnson Products | 95 | 6 | 65 | — | — | — | 65 | — |
| Kelley-Williamson Co. (xxx) | 50 | 2 | — | 35 | 15 | 41 | 2 | 7 |
| **Kent Oil Co.** | **22** | **1** | **2** | **—** | **—** | **1** | **15** | **6** |
| **Kickapoo Oil Co., Inc. (xxx)** | **70** | **1** | **70** | **70** | **—** | **—** | **70** | **—** |
| **Kimber-Allen Petroleum Corp.** | **150** | **1** | **150** | **150** | **—** | **138** | **12** | **—** |
| Kimbro Oil Co. | 40 | 1 | 40 | 40 | 0 | 38 | 2 | 0 |
| Kirschnes Bros. Oil Co. (xxx) | 50 | 2 | — | — | — | — | — | — |
| Krause General Oil Corp. | 52 | 1 | 52 | 52 | — | 8 | 44 | — |
| **The Kunz Oil Co. (xxx)** | **33** | **1** | **33** | **33** | **—** | **10** | **23** | **—** |
| **Shop, Inc.** | **101** | **3** | **101** | **99** | **2** | **—** | **99** | **2** |
| **Lake Shore Oil Co.** | **30** | **1** | **30** | **30** | **—** | **30** | **—** | **—** |
| Lehigh Oil Co., Inc. (xxx) | 26 | 4 | 26 | 26 | 3 | 0 | 22 | 4 |
| Lerner Oil Co., Inc. (xxx) | 106 | 1 | — | — | — | — | — | — |
| Lido Co. of New England | 108 | 5 | 108(L) | — | — | — | — | — |
| **Bros. Oil Co., Inc.** | **30** | **1** | **10** | **10** | **—** | **10** | **—** | **—** |
| **o Products, Inc.** | **73** | **3** | **73** | **47** | **26** | **59** | **11** | **3** |
| **nall Oil Co.** | **50** | **1** | **50** | **17** | **—** | **18** | **7** | **8** |
| Martin Oil Service, Inc. | 146 | 13 | 112 | 112 | — | 4 | 108 | — |
| Mauger & Co. (xxx) | 65 | 3 | 50 | — | — | 50 | 15 | — |
| McDowell Oil Service, Inc. | 28 | 1 | 28 | 28 | — | 5 | 0 | 23 |
| **an Oil Co., Inc.** | **1(M)** | **1** | **1** | **1** | **—** | **—** | **1** | **—** |
| **Merit Oil Corp.** | **NA** | **11** | **—** | **—** | **—** | **—** | **—** | **—** |
| **Merritt Truax, Inc.** | **56** | **1** | **56** | **56** | **—** | **43** | **3** | **10** |
| Mico Oil Co., Inc. | 28 | 14 | 28 | 28 | — | — | 28 | — |
| Midland Cooperatives, Inc. | 276 | 5 | 235 | 220 | 15 | 15 | 220 | — |
| Mid-Missouri Oil Co. | 14 | 1 | 7 | — | 7 | 2 | 5 | — |
| **M States Petroleum, Inc.** | **46** | **2** | **45** | **35** | **10** | **11** | **24** | **0** |
| **M Oil Co.** | **15** | **1** | **15** | **—** | **15** | **—** | **—** | **—** |
| **Mi Holmes, Inc. (xxx)** | **29** | **10** | **29** | **29** | **—** | **—** | **29** | **—** |
| ler Oil Co. | 12 | 2 | 12 | 12 | — | 11 | 1 | — |
| ch Oil & Supply Co. | 25 | 1 | 25 | 25 | — | 24 | 1 | — |
| ford, Inc. | 463 | 13 | 0(N) | — | — | — | — | — |
| **ket Corp.** | **100** | **1** | **100** | **100** | **—** | **—** | **100** | **—** |
| **onal Convenience Stores, Inc.** | **131** | **39** | **0** | **—** | **—** | **—** | **—** | **—** |
| **Inc.** | **44** | **1** | **44** | **44** | **—** | **2** | **42** | **—** |
| ll Oil Co., Inc | 13 | 1 | 10 | 10 | — | 8 | 1 | 1 |
| Newman Fuel Corp. | 12 | 1 | 12 | 12 | — | 11 | 1 | — |
| Petroleum Corp. (xxx) | 104 | 20 | — | — | — | — | 0 | — |
| **r Oil Co.** | **12** | **2** | **12** | **12** | **—** | **—** | **12** | **—** |
| **er Oil Co., Inc.** | **175** | **2** | **20** | **20** | **—** | **20** | **—** | **—** |
| **s Parker Oil Co.** | **41** | **1** | **18** | **—** | **18** | **18** | **—** | **—** |
| ey Oil Co. | 7 | 1 | 7 | 7 | — | 4 | — | — |
| er Corp. | 221 | 10 | 222 | 221 | — | — | 221 | — |

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1980 data: Company failed to respond to 1981 questionnaire.
s of 12/21/81. Includes Prestige Stations, Inc.
Company Operated.
Includes Fulcher & Martin.

(D) Includes 4 gas, 3 fuel oil, 5 chemical.
(E) Estimated.
(F) Gasoline and distillates.
(G) Excluding two refineries.

(H) They are a Phillips Jobber.
(I) Most agents sell only propane.
(J) They are Jobbers.
(K) Percent.

# Product Distribution (cont.)

| | | | BRANDED JOBBERS | | | | COMMISSION AGENTS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | NUMBER SELLING . . . | | | | NUMBER SELLING . . . | | |
| 100% full service | 100% self service | Service and self service | Total | Gasoline only | Fuel oil only | Gasoline & fuel oil | Total | Gasoline only | Fuel oil only | Gasoline & fuel oil |
| 8 | 8 | 1 | 1 | — | — | 1 | 0 | — | — | — |
| 1 | 13 | — | 0 | — | — | — | 0 | — | — | — |
| 20 | — | 10 | 0 | — | — | — | 0 | — | — | — |
| 57 | 3 | — | 1 | — | — | 1 | 1 | 1 | — | — |
| 93 | 30 | 12 | 0 | — | — | — | 8 | — | — | 8 |
| 25 | 63 | 46 | — | — | — | — | 5 | — | — | 5 |
| — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 630 | — | — | — | — | — | — | — |
| — | — | — | NA | — | — | — | NA | — | — | — |
| — | — | — | 0 | — | — | — | 0 | — | — | — |
| 57 | 46 | 1 | 0 | — | — | — | 0 | — | — | — |
| 3 | 65 | 3 | — | — | — | — | 26(I) | — | — | 6 |
| 24 | 14 | 1 | 39 | 24 | — | 15 | 0 | 0 | 0 | 0 |
| 104 | — | — | 0 | — | — | — | 0 | 0 | — | — |
| — | 11 | — | 0 | — | — | — | 0 | — | — | — |
| 20 | 114 | — | 0 | — | — | — | 0 | — | — | — |
| — | 34 | — | — | — | — | — | — | — | — | — |
| — | 20 | — | 0 | — | — | — | 0 | — | — | — |
| — | 56 | 3 | 0 | — | — | — | 0 | — | — | — |
| 14 | 6 | 27 | 0 | — | — | — | 0 | — | — | — |
| 3 | 12 | — | 0 | — | — | — | 0 | — | — | — |
| 78 | 10 | — | 0 | — | — | — | 0 | — | — | — |
| 3 | 0 | 1 | —(J) | — | — | — | NA | — | — | — |
| 120 | 10 | 3 | 128 | 0 | 0 | 115 | 0 | — | — | — |
| 40 | 11 | 1 | — | — | — | — | — | — | — | — |
| 10 | 4 | 2 | — | — | — | — | 0 | — | — | — |
| 3 | — | 37 | 0 | — | — | — | 12 | 12 | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| 3 | — | 3 | — | — | — | — | — | — | — | — |
| 183 | 0 | 40 | 0 | — | — | — | 0 | — | — | — |
| 31 | 59 | 10 | — | — | — | — | — | — | — | — |
| 5 | 1 | 12 | 0 | — | — | — | 0 | — | — | — |
| 28 | 1 | 9 | 2 | — | — | 2 | 0 | — | — | — |
| 0 | 0 | 0 | 0 | — | — | — | 0 | — | — | — |
| 0 | 0 | 305 | — | — | — | — | 0 | — | — | — |
| 30 | 73 | 30 | 1 | 1 | 1 | 1 | 0 | — | — | — |
| 1 | 14 | — | 0 | — | — | — | 0 | — | — | — |
| 227 | 285 | 50(E) | 140 | — | — | 140 | 0 | 0 | 0 | 0 |
| 6 | 72 | 1 | 0 | — | — | — | 0 | — | — | — |
| 16 | — | — | 0 | — | — | — | 0 | — | — | — |
| 35 | — | 30 | 0 | — | — | — | 0 | — | — | — |
| 35 | 3 | 12 | 0 | — | — | — | 12 | — | — | 12 |
| 0 | 20 | 2 | 0 | — | — | — | 0 | — | — | — |
| — | 70 | — | 0 | — | — | — | 0 | — | — | — |
| 150 | — | — | 0 | — | — | — | 0 | — | — | — |
| — | 2 | 38 | 1 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| — | — | 52 | 0 | — | — | — | 0 | — | — | — |
| 19 | 13 | 1 | 0 | — | — | — | 0 | — | — | — |
| — | 101 | — | 0 | — | — | — | 0 | — | — | — |
| 80(K) | — | 20(K) | NA(J) | — | — | — | 0 | — | — | — |
| 17 | 9 | — | 0 | — | — | — | 4 | 4 | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 3 | 1 | — | 2 | 0 | — | — | — |
| 10 | — | — | 0 | — | — | — | 0 | — | — | — |
| 0 | 73 | — | 7 | 7 | 0 | — | 0 | — | — | — |
| — | — | 50 | — | — | — | — | — | 17 | — | — |
| 3 | 102 | 7 | NA | — | — | — | NA | — | — | — |
| 55 | 10 | — | NA | — | — | — | NA | — | — | — |
| 6 | 22 | — | — | — | — | — | — | — | — | — |
| 1 | — | — | 0 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| 56 | — | — | 2 | — | — | 2 | 0 | — | — | — |
| 26 | 2 | — | 0 | — | — | — | 0 | — | — | — |
| 75 | 25 | 135 | 235 | — | — | 235 | 15 | — | — | 15 |
| — | 6 | 1 | 0 | — | — | — | 0 | — | — | — |
| 11 | 34 | — | 4 | — | — | 4 | 3 | — | — | 3 |
| — | — | 15 | 0 | — | — | — | 0 | — | — | — |
| 1 | 28 | — | 0 | — | — | — | 0 | — | — | — |
| 12 | — | — | 0 | — | — | — | 0 | — | — | — |
| 23 | 1 | 1 | 1 | — | 1 | — | — | — | — | — |
| — | — | — | NA | — | — | — | NA | — | — | — |
| — | 100 | — | 0 | — | — | — | 0 | — | — | — |
| — | — | — | 1 | 1 | — | — | 0 | — | — | — |
| 3 | 41 | — | 0(J) | — | — | — | 0 | — | — | — |
| — | 5 | 5 | —(J) | — | — | — | 0 | — | — | — |
| 8 | — | 4 | 0 | — | — | — | 0 | — | — | — |
| — | — | 0 | — | — | — | — | 0 | — | — | — |
| — | 12 | — | 0 | — | — | — | 0 | — | — | — |
| 4 | — | 16 | 0 | — | — | — | 0 | — | — | — |
| 13 | 1 | 4 | NA | — | — | — | 2 | — | — | — |
| 7 | — | — | — | — | — | — | — | — | — | — |
| — | 219 | 2 | 0 | — | — | — | 0 | — | — | — |

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(L) Lease do not run.
(M) Majority of business not gasoline.
(N) Portion sell gasoline in Majik Div.
(O) 15 jointly owned.
(P) Owner dealer operated.
(Q) Almost all.
(R) Proprietary.
(S) Direct supplied stations only. Data not available for jobber supplied.
(T) Confidential data.
(U) Non Lessee dealer—Ship Store PX—Jobber served non-dealer
(V) Other, 4,598.
(W) Most.

| BULK PLANTS |  |  |  | TERMINALS |  |  |  |  |
|---|---|---|---|---|---|---|---|---|
| COMPANY OPERATED |  |  |  |  | COMPANY OPERATED |  |  |  |
| Total | Salary operated | Commission operated | Jobber operated bulk plants | Total | Salary operated | Commission operated | Jobber operated terminals | INDEPENDENT OIL COMPANIES AND SELECTED OIL JOBBERS |
| 2 | 2 | — | 1 | 0 | — | — | 0 | **Don Foster Oil Co.** |
| 0 | — | — | — | 0 | — | — | 0 | **Drake's Refining Stations, Inc.** |
| 0 | — | — | 0 | 0 | — | — | — | **East Coast Oil Corp.** |
| 1 | 1 | — | 0 | 1 | 1 | — | 0 | Elm City Filling Station, Inc. |
| 5 | — | 5 | 0 | 1 | 1 | — | 0 | E. M. Gailey Dist. Co. |
| 10 | 10 | — | — | — | — | — | — | Englefield Oil Co. |
| — | — | — | — | — | — | — | — | **Farm Stores, Inc.** |
| — | — | — | — | — | — | — | — | **Farmland Industries, Inc.** |
| — | 23 | — | 0 | NA | — | — | — | **FCX, Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | Fireline Petroleum |
| 0 | — | — | 0 | 0 | — | — | 0 | Fisca Oil Co., Inc. |
| 5 | 3 | 2 | — | 7/8 | — | — | — | Flying J, Inc. |
| 2 | 2 | 0 | 0 | 0 | — | — | 0 | **Don Foster Oil Co.** |
| 0 | — | — | — | 0 | — | — | — | **Franko Oil Co.** |
| 0 | — | — | 0 | 0 | — | — | — | **Gas-N-Go, Inc.** |
| 0 | — | — | 0 | 1 | 1 | — | 0 | Gasco Gasoline |
| — | — | — | — | — | — | — | — | General Oil Co. |
| 0 | — | — | — | 0 | 0 | — | — | Giant Industries, Inc. |
| 0 | — | — | — | 0 | — | — | — | **Globe Oil Co., USA** |
| 0 | — | — | NA | 0 | — | — | NA | **Golden Imperial, Inc.** |
| 0 | — | — | 0 | 0 | — | — | — | **Golub Service Stations** |
| 1 | — | — | — | 0 | — | — | — | Great River Oil Co. |
| 1 | — | — | — | 0 | — | — | — | Gresham Petroleum Co. |
| 0 | — | — | 285 | 4 | 4 | — | 0 | Growmark, Inc. |
| 3 | 3 | — | — | 1 | 1 | — | — | **Guttman Oil Co.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Harrell Petroleum Co.** |
| 1 | — | — | 0 | 0 | — | — | 0 | **Harris Enterprises, Inc.** |
| — | — | — | — | — | — | — | — | Heathwood Oil Co. |
| — | — | — | — | 0 | — | — | — | Higgens Oil Co., Inc. |
| 0 | — | — | 0 | 0 | — | — | 0 | Highway Oil, Inc. |
| 6 | 6 | — | 0 | 0 | — | — | 0 | **Angus J. Hines, Inc.** |
| 1 | 1 | — | 0 | 0 | — | — | — | **Hi-Quality Lo-Cost Svc. Stations, Inc.** |
| 1 | 1 | 0 | 2 | 0 | — | — | 0 | **Holland Oil Co.** |
| 0 | — | — | — | 0 | — | — | 0 | Hop-In Food Stores, Inc. |
| — | — | — | — | — | — | — | — | Hudson Oil Co. |
| 4 | 2 | 2 | 2 | 0 | — | — | — | Hughes Oil Co. |
| 0 | — | — | 0 | 0 | — | — | — | **Hull Oil Co.** |
| 2 | 0 | 2 | 3 | 1 | 1 | 0 | 0 | **Husky Oil Co.** |
| 0 | — | — | — | 0 | — | — | — | **J & L Oil, Inc.** |
| 0 | — | — | — | 0 | — | — | — | J. S. & J. Service, Inc. |
| 0 | — | — | 0 | 0 | — | — | 0 | Johnson Products |
| 9 | 1 | 3 | — | 0 | — | — | — | Kelley-Williamson Co. |
| 0 | — | — | — | 0 | — | — | — | **Kent Oil Co.** |
| 1 | — | — | — | 1 | 1 | — | — | **Kickapoo Oil Co., Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Kimber-Allen Petroleum Corp.** |
| 1 | 0 | 0 | 1 | 0 | — | — | 0 | Kimbro Oil Co. |
| — | — | — | — | — | — | — | — | Kirschner Bros. Oil Co. |
| 1 | — | — | 0 | 0 | — | — | 0 | Krause General Oil Corp. |
| 0 | — | — | — | 0 | — | — | — | **The Kunz Oil Co.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Kwik Shop, Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Lake Shore Oil Co.** |
| 2 | 2 | — | 0 | 2 | 2 | — | — | Lehigh Oil Co., Inc. |
| 0 | — | — | 0 | — | — | — | — | Lerner Oil Co., Inc. |
| 4 | — | — | — | 0 | — | — | — | Lido Co. of New England |
| 7 | 7 | — | — | 1 | 1 | — | — | **Main Bros. Oil Co., Inc.** |
| 1 | 1 | — | — | 0 | — | — | 0 | **Malco Products, Inc.** |
| 0 | — | — | 0 | 0 | — | — | — | **Marshall Oil Co.** |
| 2 | 2 | — | NA | 3 | 3 | — | NA | Martin Oil Service, Inc. |
| NA | — | — | — | — | — | — | — | Mauger & Co. |
| 1 | 1 | — | — | — | — | — | — | McDowell Oil Service, Inc. |
| 10 | 10 | — | 0 | 22 | 22 | — | 0 | **Meenan Oil Co., Inc.** |
| — | — | — | — | — | — | — | — | **Merit Oil Corp.** |
| 4 | 4 | — | 2 | 0 | — | — | 0 | **Merritt Truax, Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | Mico Oil Co., Inc. |
| 168 | 168 | — | 168 | 2 | 2 | — | 0 | Midland Cooperatives, Inc. |
| 2 | 2 | — | 0 | 0 | — | — | 0 | Mid-Missouri Oil Co. |
| 2 | 2 | — | 2 | 0 | — | — | — | **Mid-States Petroleum, Inc.** |
| 1 | — | — | 0 | 0 | — | — | 0 | **Milder Oil Co.** |
| 0 | — | — | — | 0 | — | — | — | **Miller & Holmes, Inc.** |
| 0 | — | — | — | 0 | — | — | — | The Miller Oil Co. |
| 1 | — | — | 0 | 1 | — | — | — | Monarch Oil & Supply Co. |
| NA | — | — | — | — | — | — | — | Munford, Inc. |
| 0 | — | — | 0 | 0 | — | — | 0 | **Musket Corp.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **National Convenience Stores, Inc.** |
| 0 | — | — | — | 0 | — | — | 0 | **Neal, Inc.** |
| 3 | 3 | — | — | 0 | — | — | 0 | Newell Oil Co., Inc. |
| 0 | — | — | 0 | 1 | 1 | — | 0 | R. B. Newman Fuel Corp. |
| 0 | — | — | 0 | — | — | — | 0 | Oasis Petroleum Corp. |
| 0 | — | — | 0 | 0 | — | — | — | **Pacer Oil Co.** |
| 0 | [illegible] | — | 0 | 1 | 1 | — | 0 | **Parker Oil Co., Inc.** |
| 3 | 1 | 2 | NA | 0 | — | — | 0 | **Curtis Parker Oil Co.** |
| 1 | 1 | — | — | 1 | 1 | — | — | Peavey Oil Co. |
| 0 | — | — | — | 0 | — | — | — | Pester Corp. |

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(X) Total wholesale distributing plants, including terminals.
(*) Total branded retail outlets includes garages, motels, c-stores and service stations. By U.S. Census Bureau definition, only establishments earning 50% or more of their income from the sale of petroleum products are service stations.
(†) Total number of states where gasoline is branded includes District of Columbia.
Source: NPN questionnaires.

# How Oil Companies Handle

| INDEPENDENT OIL COMPANIES AND SELECTED OIL JOBBERS | TOTAL BRANDED RETAIL OUTLETS* | TOTAL NUMBER OF STATES WHERE GASOLINE BRAND IS MARKETED† | Total branded service stations | BRANDED SERVICE STATIONS | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | Supplied directly | Supplied through jobbers and commission agents | Lessee/dealer operated | Salary operated | Commission operated |
| Petroleum Sales & Service | 100 | 1 | 100 | 100 | — | 95 | 5 | — |
| Petroleum Oil Co. (xxx) | 54 | 2 | 46 | 46 | — | 15 | 15 | 16 |
| Phillips Fuel Co. | 88 | 1 | 88 | — | 88 | 87 | — | 1 |
| Piasa Motor Fuels, Inc. | 22 | 2 | 16 | 22 | — | 16 | 6 | — |
| Pilot Oil Corp. | 94 | 8 | 94 | 94 | — | — | 94 | — |
| Port Oil, Inc. | 55 | 2 | 55 | 55 | — | — | 55 | — |
| Powerine Oil Co. | 39 | 2 | 39 | 39 | — | — | 39 | — |
| Power Test Corp. | 502 | 5 | 502 | 502 | — | 437 | 65 | — |
| Premium Petroleum Products, Inc. | 50 | 1 | 50 | 50 | — | 49 | — | 1 |
| Pride of Texas Distributing Co., Inc. | 29 | 1 | 29 | 29 | — | 27 | 2 | — |
| Pride Oil Co., Inc. (Miss.) | 25 | 2 | 25 | 25 | — | 33 | 1 | 21 |
| Pride Oil Co., Inc. (Tenn.) | 15 | 1 | 15 | 15 | — | — | 15 | — |
| Private Brand Services, Inc. | 5 | 1 | 5 | 4 | 1 | — | 5 | — |
| Publix Oil Co., Inc. | 101 | 5 | 101 | 101 | 0 | 101 | 8 | 93 |
| W. H. Pugh Oil Co. | 17 | 1 | 17 | 13 | 4 | 9 | 8 | — |
| Quaker State Oil Refining Corp. | 329 | 4 | 209 | 102 | 107 | 209 | — | — |
| Quality Oil Co. | 164 | 2 | 161 | 161 | — | 96 | 14 | 17 |
| Racetrac Petroleum, Inc. | 125 | 12 | 125 | 125 | — | 60 | 65 | — |
| Red Hed Oil Co. | 27 | 1 | 2 | 27 | — | 3 | 6 | 18 |
| Reinhardt Oil Corp. | 32 | 1 | 6 | 6 | — | 6 | — | — |
| Remote Services, Inc. (xxx) | 301 | 13 | 301 | 301 | — | — | 25 | 276 |
| Reynolds Industries | 12 | 2 | 19 | 12 | — | 7 | 12 | — |
| River City Petroleum, Inc. | 18 | 1 | 18 | 18 | — | — | 9 | 9 |
| River Oil Co. (xxx) | 32 | 2 | 24 | — | 24 | 23 | 1 | — |
| Romanco, Inc. | 187 | 6 | 112 | 112 | — | 60 | 52 | — |
| Sahara Oil Co., Inc. | 22 | 1 | 22 | 22 | — | 5 | 17 | — |
| Santee Oil Co., Inc. | 62 | 1 | 16 | 16 | — | 12 | — | — |
| Schaeffer Oil | 29 | 5 | 5 | 5 | — | 1 | — | 4(P) |
| Self-Service Oil Co. | 19 | 4 | 19 | 19 | — | — | 19 | — |
| Seminole Asphalt Refining Co. | 26 | 3 | 26 | 26 | — | — | — | 26 |
| Shelby Petroleum Corp. | 20 | 2 | 20 | 20 | — | — | 20 | — |
| Shotmeyer Bros. Petroleum Corp. | 60 | 1 | 60 | 60 | — | 20 | — | 40 |
| Shotmeyer Oil Corp. | 41 | 3 | 41 | 41 | — | 3 | — | 38 |
| The SICO Co. | 155 | 4 | 91 | 75 | 16 | 65 | 26 | — |
| Sigmor Corp. | 577 | 20 | 577 | 577 | 0 | 0 | 577 | 0 |
| Simon Oil Co., Inc. | 65 | 1 | 65 | 65 | — | 56 | 9 | — |
| Sing Oil Co. (xxx) | 55 | 4 | 55 | — | 14 | 41 | — | — |
| Smith-Shafer Oil Co. | 10 | 3 | 10 | 10 | — | — | 8 | 2 |
| SMO, Inc. (xxx) | 120 | 2 | 120 | 120 | 1 | 91 | 22 | 7 |
| Somerset Refinery (xxx) | 46 | 9 | — | — | — | — | — | — |
| South Central Oil Co. (xxx) | 182 | 15 | 182 | 182 | — | 96 | 85 | 1 |
| Southeastern Petroleum Sales Corp. | 50 | 2 | 50 | 50 | 0 | 45 | 5 | — |
| Southern Counties Oil Co. | 5 | 1 | 5 | — | 5 | — | 5 | — |
| Southern Union Refining Co. (xxx) | 22 | 1 | 22 | 22 | — | — | — | 22 |
| The Spencer Companies, Inc. (xxx) | 84 | 1 | — | — | — | — | — | — |
| M. Spiegel & Sons Oil Corp. | 25 | 2 | 25 | 25 | — | 25 | — | — |
| J. D. Street & Co., Inc. | 356 | 5 | — | — | — | — | — | — |
| Star Oil Co. | 55 | 1 | 35 | 23 | 12 | 30 | — | 5 |
| Star Service & Petroleum Co. | 186 | 17 | 186 | 186 | — | 186 | — | — |
| Suburban Propane Gas Co. | 95 | 4 | 95 | 95 | — | 30 | 65 | — |
| Sunny Service Stations, Inc. | 15 | 1 | 11 | — | 11 | 3 | 8 | — |
| Sunshine Jr. Stores, Inc. | 307 | 5 | 307 | 57 | 250 | — | — | — |
| Tanner Oil Co. (xxx) | 90 | 3 | 80 | 80 | — | 4 | 75 | 1 |
| Taylor Oil Co. | 56 | 2 | 56 | 56 | — | — | — | 56 |
| Texas Star Oil Co. (xxx) | 75 | 1 | 75 | 75 | — | — | 40 | 35 |
| Thornhill Oil Co., Inc. | 20 | 1 | 20 | 20 | — | — | 5 | — |
| Thornton Oil Corp. | 100 | 18 | 100 | 100 | — | — | 100 | — |
| Thriftyman Enterprises (xxx) | 50 | 1 | 50 | 50 | — | 5 | 35 | 10 |
| Time Oil Co. | 211 | 5 | 211 | 211 | — | —(T) | —(T) | —(T) |
| Tommy Oil Co. | 36 | 12 | 36 | — | 36 | — | 36 | — |
| Total Petroleum, Inc. | 1,893 | 22 | 1,893 | 461 | 1,432 | 1,432 | 453 | 8 |
| Travelers Petroleum, Inc. | 79 | 3 | 79 | 79 | 0 | 0 | 79 | 0 |
| Traux, Inc. | 92 | 2 | 100(K) | 100(K) | — | 53 | 38 | — |
| Trenton Oil Co. | 50 | 1 | 100 | — | 50 | 40 | — | 10 |
| United Refining Co. | — | — | — | — | — | — | — | — |
| Wake Up Oil Co., Inc. | 42 | 1 | 42 | 42 | — | 0 | 42 | 0 |
| Warelubco, Inc. | 84 | 6 | 84 | 83 | 1 | — | 14 | 69 |
| Webaco Oil Co. | 14 | 1 | 18 | 14 | 3 | 1 | — | — |
| Webb Oil Co. | 19 | 2 | — | — | — | — | — | — |
| Webster Oil Co. | 35 | 1 | 20 | 20 | — | 31 | 4 | — |
| Wesson | 12 | 1 | 12 | 12 | — | 2 | 10 | — |
| Western Marketing, Inc. | 19 | 2 | 0 | — | — | — | — | — |
| Wickland Oil Co. | 86 | 3 | 84 | 84 | — | — | 84 | — |
| A. T. Williams Oil Co. | 65 | 2 | 65 | 65 | — | — | 65 | — |
| J. H. Williams Oil Co., Inc. | 81 | 1 | 72 | 67 | 5 | 67 | 4 | 1 |
| York Oil Co., Inc. | 14 | 1 | 14 | 14 | — | — | 14 | — |
| Zepher, Inc. | 84 | 2 | 71 | — | — | — | — | — |

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(xxx) 1980 data: Company failed to respond to 1981 questionnaire.
(A) As of 12/21/81. Includes Prestige Stations, Inc.
(B) Company operated.
(C) Includes Fulcher & Martin.
(D) Includes 4 gas, 3 fuel oil, 5 chemical.
(E) Estimated
(F) Gasoline and distillates.
(G) Excluding two refineries.
(H) They are a Phillips Jobber.
(I) Most agents sell only propane.
(J) They are Jobbers.
(K) Percent.

# Product Distribution (cont'd.)

| | | | BRANDED JOBBERS | | | | COMMISSION AGENTS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | NUMBER SELLING . . . | | | | NUMBER SELLING . . . | | |
| 100% full service | 100% self service | Service and self service | Total | Gasoline only | Fuel oil only | Gasoline & fuel oil | Total | Gasoline only | Fuel oil only | Gasoline & fuel oil |
| 10 | 20 | 70 | — | — | — | — | — | — | — | — |
| 43 | 3 | 6 | 0 | — | — | — | 0 | — | — | — |
| 80 | — | — | 0 | — | — | — | 0 | — | — | — |
| 12 | — | 10 | 0 | — | — | — | 0 | — | — | — |
| 4 | 90 | — | 0 | — | — | — | 0 | — | — | — |
| 9 | 38 | 8 | 0 | — | — | — | 0 | — | — | — |
| — | 39 | — | 0 | — | — | — | 0 | — | — | — |
| 477 | 25 | — | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 | — | — | 0 | — | — | — | 0 | — | — | — |
| 6 | 12 | 11 | 0 | — | — | — | 0 | — | — | — |
| 24 | — | 1 | 0 | — | — | — | 0 | — | — | — |
| 8 | 8 | 7 | 0 | — | — | — | 0 | — | — | — |
| 1 | 4 | — | 0 | — | — | — | 0 | — | — | — |
| 10 | 67 | 25 | 0 | — | — | — | 0 | — | — | — |
| 11 | 6 | — | — | — | — | — | 2 | — | — | 2 |
| 197 | 12 | — | 36 | — | — | 36 | 0 | — | — | — |
| 20 | 32 | 109 | 0 | — | — | — | 0 | — | — | — |
| 75 | 50 | — | 0 | — | — | — | 0 | — | — | — |
| 4 | 23 | 0 | 2 | 2 | — | — | 0 | — | — | — |
| — | — | 6 | 0 | — | — | — | — | — | — | — |
| 26 | 276 | — | 0 | — | — | — | 0 | — | — | — |
| 11 | 1 | — | 0 | — | — | — | 0 | — | — | — |
| — | 18 | — | 0 | — | — | — | 0 | — | — | — |
| 3 | 11 | 20 | 1 | 1 | — | — | 0 | — | — | — |
| 0 | 110 | 2 | 0 | — | — | — | 0 | — | — | — |
| 2 | 17 | 3 | 0 | — | — | — | 0 | — | — | — |
| 3 | 3 | 10 | 0 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | 4 | — | — | 4 |
| — | 19 | — | 0 | — | — | — | — | — | — | — |
| — | 26 | — | 0 | — | — | — | 0 | — | — | — |
| 20 | — | — | 0 | — | — | — | 0 | — | — | — |
| 60 | — | — | NA | — | — | — | NA | — | — | — |
| 41 | — | — | 0 | — | — | — | 0 | — | — | — |
| 73 | 14 | 4 | 7 | — | — | 7 | 57 | 57 | — | — |
| 14 | 563 | — | 0 | — | — | — | 0 | — | — | — |
| 58 | 7 | — | 0 | — | — | — | 0 | — | — | — |
| — | 36 | 17 | 0 | — | — | — | 0 | — | — | — |
| 1 | 8 | 1 | 0 | — | — | — | 0 | — | — | — |
| 20 | 20 | 80 | — | — | — | — | 6 | 6 | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| 97 | 85 | — | 0 | — | — | — | 1 | 1 | — | — |
| — | 40 | 10 | 0 | — | — | — | 0 | — | — | — |
| — | 5 | — | 1 | 1 | — | — | 0 | — | — | — |
| — | 22 | — | 0 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| 20 | % | 5 | 0 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| 20 | 5 | 10 | 2 | — | — | 2 | 0 | — | — | — |
| 22 | 37 | 127 | 0 | — | — | — | 0 | — | — | — |
| — | 96 | — | 0 | — | — | — | 0 | — | — | — |
| — | — | 11 | 1 | — | — | 1 | 0 | — | — | — |
| — | 307 | — | 9 | — | — | — | 29 | — | — | 29 |
| 17 | 7 | 56 | 0 | — | — | — | 0 | — | — | — |
| — | 52 | 4 | 0 | — | — | — | 0 | — | — | — |
| — | 75 | — | 0 | — | — | — | 0 | — | — | — |
| 6 | 6 | 8 | — | — | — | — | — | — | — | — |
| — | 100 | — | 0 | — | — | — | 0 | — | — | — |
| — | 50 | — | — | — | — | — | — | — | — | — |
| 0 | 211 | — | — | — | — | — | — | — | — | — |
| 20 | 1 | 15 | 0 | — | — | — | 0 | — | — | — |
| 300(E) | 500(E) | 1,193(E) | 508 | 324 | — | 184 | 0 | — | — | — |
| 0 | 79 | 0 | 0 | — | — | — | 0 | — | — | — |
| 88 | 3 | — | — | — | — | — | — | — | — | — |
| 100 | — | — | 0 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| 29 | 1 | 12 | 0 | — | — | — | 0 | — | — | — |
| — | 4 | 79 | 1 | 1 | — | — | — | — | — | — |
| — | 14 | — | 0 | — | — | — | 0 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — |
| — | 15 | 16 | NA | — | — | — | NA | — | — | — |
| 3 | 8 | 1 | 0 | — | — | — | 0 | — | — | — |
| — | — | — | 3 | 3 | — | — | 0 | — | — | — |
| 1 | 83 | — | 0 | — | — | — | 0 | — | — | — |
| — | 60 | 5 | — | — | — | — | — | — | — | — |
| 40 | 2 | 30 | 0 | — | — | — | 1 | — | — | 1 |
| — | 14 | — | — | — | — | — | — | — | — | — |
| — | — | — | 10 | — | — | — | 0 | — | — | — |

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(L) Lease do not run.
(M) Majority of business not gasoline.
(N) Portion sell gasoline in Majik Div.
(O) 15 jointly owned.
(P) Owner/dealer operated.
(Q) Almost all.
(R) Proprietary.
(S) Direct supplied stations only. Data not available for jobber supplied.
(T) Confidential data.
(U) Non/Lessee dealer—Ship Store/PX—Jobber served non-dealer.
(V) Other, 4,598.
(W) Most.

| BULK PLANTS | | | | TERMINALS | | | | |
|---|---|---|---|---|---|---|---|---|
| COMPANY OPERATED | | | | COMPANY OPERATED | | | | |
| Total | Salary operated | Commission operated | Jobber operated bulk plants | Total | Salary operated | Commission operated | Jobber operated terminals | INDEPENDENT OIL COMPANIES AND SELECTED OIL JOBBERS |
| — | — | — | — | — | — | — | — | **Petroleum Sales & Service** |
| 2 | 2 | — | — | 0 | — | — | — | **Petroleum Oil Co.** |
| 0 | — | — | — | 1 | 1 | — | — | **Phillips Fuel Co.** |
| 1 | — | — | NA | 0 | — | — | — | Piasa Motor Fuels, Inc. |
| 0 | — | — | — | 0 | — | — | — | Pilot Oil Corp. |
| 0 | — | — | 0 | 0 | — | — | — | Port Oil, Inc. |
| 0 | — | — | — | 3 | 3 | — | 0 | **Powerine Oil Co.** |
| 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | **Power Test Corp.** |
| 0 | — | — | — | 0 | — | — | — | **Premium Petroleum Products, Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | Pride of Texas Distributing Co., Inc. |
| 0 | — | — | 0 | 0 | — | — | 0 | Pride Oil Co., Inc. (Miss.) |
| 1 | 1 | — | 1 | 0 | — | — | 0 | Pride Oil Co., Inc. (Tenn.) |
| 0 | — | — | 0 | 0 | — | — | — | **Private Brand Services, Inc.** |
| 0 | — | — | — | 0 | — | — | — | **Publix Oil Co., Inc.** |
| 2 | — | 2 | — | 1 | 1 | — | — | **W. H. Pugh Oil Co.** |
| 1 | 1 | — | 6 | 3 | 3 | — | — | Quaker State Oil Refining Corp. |
| 7 | 7 | — | 0 | 0 | — | — | 0 | Quality Oil Co. |
| 0 | — | — | — | 0 | — | — | — | Racetrac Petroleum, Inc. |
| 0 | — | — | 0 | 0 | — | — | 0 | **Red Hed Oil Co.** |
| — | — | — | 0 | 5 | 5 | — | 0 | **Reinhardt Oil Corp.** |
| 0 | — | — | — | 0 | — | — | — | **Remote Services, Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | Reynolds Industries |
| 1 | 1 | — | 0 | 1 | 1 | — | 0 | River City Petroleum, Inc. |
| 1 | — | — | — | 0 | — | — | — | River Oil Co. |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | **Romanco, Inc.** |
| 2 | 2 | — | 0 | 0 | — | — | 0 | **Sahara Oil Co., Inc.** |
| 4 | — | — | 0 | 0 | — | — | — | **Santee Oil Co., Inc.** |
| 3 | — | 3 | — | — | — | — | — | Schaeffer Oil |
| 0 | — | — | — | 0 | — | — | — | Self-Service Oil Co. |
| 1 | 1 | — | 0 | 1 | 1 | — | 0 | Seminole Asphalt Refining Co. |
| 1 | 1 | — | 0 | 0 | — | — | — | **Shelby Petroleum Corp.** |
| 1 | — | — | — | 1 | 1 | — | NA | **Shotmeyer Bros. Petroleum Corp.** |
| 0 | 0 | — | 0 | 4 | 4 | — | 0 | **Shotmeyer Oil Corp.** |
| 19 | 19 | — | — | 1 | 1 | — | — | The SICO Co. |
| 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | Sigmor Corp. |
| 0 | — | — | 0 | 0 | — | — | — | Simon Oil Co., Inc. |
| 0 | — | — | — | 0 | — | — | — | **Sing Oil Co.** |
| 1 | 1 | — | 0 | 0 | — | — | 0 | **Smith-Shafer Oil Co.** |
| 9 | 9 | — | — | 1 | 1 | — | — | **SMO, Inc.** |
| — | — | — | — | — | — | — | — | Somerset Refinery |
| 0 | — | — | 0 | 0 | — | — | z8 | South Central Oil Co. |
| 0 | — | — | 0 | 0 | — | — | — | Southeastern Petroleum Sales Corp. |
| 2 | 2 | — | 0 | 0 | — | — | 0 | **Southern Counties Oil Co.** |
| 0 | — | — | 0 | 0 | — | — | — | **Southern Union Refining Co.** |
| — | — | — | — | — | — | — | — | **The Spencer Companies, Inc.** |
| 2 | 2 | — | 0 | 0 | — | — | — | M. Spiegel & Sons Oil Corp. |
| — | — | — | — | 2 | 2 | — | — | J. D. Streett & Co., Inc. |
| 1 | 1 | — | 2 | 0 | — | — | 2 | Star Oil Co. |
| 0 | — | — | 0 | 0 | — | — | — | **Star Service & Petroleum Co.** |
| 0 | — | — | 0 | 2 | 2 | — | — | **Suburban Propane Gas Co.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Sunny Service Stations, Inc.** |
| 0 | — | — | 0 | 0 | — | — | — | Sunshine JR Stores, Inc. |
| 0 | — | — | 0 | 0 | — | — | — | Tanner Oil Co. |
| 0 | — | — | 0 | 1 | 1 | — | NA | Taylor Oil Co. |
| 0 | — | — | 0 | 0 | — | — | — | **Texas Star Oil Co.** |
| 3 | 3 | — | 0 | 0 | — | — | — | **Thornhill Oil Co., Inc.** |
| 0 | — | — | — | 0 | — | — | — | **Thornton Oil Corp.** |
| — | — | — | — | — | — | — | — | Thriftyman Enterprises |
| — | — | — | — | 8 | 8 | — | — | Time Oil Co. |
| NA | — | — | — | NA | — | — | NA | Tommy Oil Co. |
| 0 | — | — | — | 8 | 8 | — | 0 | **Total Petroleum, Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Travelers Petroleum, Inc.** |
| — | 8 | 1 | — | 0 | — | — | — | **Traux, Inc.** |
| 0 | — | — | 0 | — | — | — | — | Trenton Oil Co. |
| — | — | — | — | — | — | — | — | United Refining Co. |
| 0 | — | — | NA | 0 | — | — | NA | Wake Up Oil Co., Inc. |
| — | — | — | — | 0 | — | — | — | **Warelubco, Inc.** |
| 0 | — | — | 0 | 0 | — | — | 0 | **Webaco Oil Co.** |
| — | — | — | — | — | — | — | — | **Webb Oil Co.** |
| 2 | 2 | — | NA | 0 | — | — | — | Webster Oil Co. |
| 1 | 1 | — | — | 0 | — | — | — | Wesson |
| 2 | 2 | — | 0 | 0 | — | — | — | Western Marketing, Inc. |
| 0 | — | — | 0 | 1 | 1 | 0 | — | **Wickland Oil Co.** |
| — | 4 | — | 4 | — | — | — | — | **A. T. Williams Oil** |
| 4 | 3 | 1 | 0 | 0 | — | — | 0 | **J. H. Williams Oil Co., Inc.** |
| 3 | 3 | — | — | — | — | — | — | York Oil Co., Inc. |
| 3 | — | 3 | — | 2 | 2 | — | 0 | Zepher, Inc. |

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(X) Total wholesale distributing plants, including terminals.

(*) Total branded retail outlets includes garages, motels, c-stores and service stations. By U.S. Census Bureau definition, only establishments earning 50% or more of their income from the sale of petroleum products are service stations.

(†) Total number of states where gasoline is branded includes District of Columbia.

Source: NPN questionnaires.

# Branded Retail Outlets

| Company | TOTAL BRANDED RETAIL OUTLETS | TOTAL NUMBER OF STATES WHERE GASOLINE BRAND IS MARKETED† | New England | | | | | | Middle Atlantic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Maine | N.H. | Vt. | Mass. | R.I. | Conn. | N.Y. | N.J. | Pa. |
| **Agway Petroleum Corp.** | 283 | 9 | 8 | 8 | 10 | 25 | 1 | 3 | 132 | 23 | 73 |
| **American Petrofina, Inc. (a)** | 4,014 | 20 | — | — | — | — | — | — | — | — | — |
| **Amoco Oil Co.** | 20,061 | 46 | 188 | 99 | 53 | 327 | 25 | 197 | 744 | 519 | 816 |
| Armour Oil Co. | 34 | 11 | — | — | — | — | — | — | 1 | — | — |
| Ashland Oil, Inc. (xxx) | 271 | 8 | — | — | — | — | — | — | — | — | 5 |
| Atlantic Richfield Co. (c) | 7,122(A) | 30 | — | 25 | 60 | 318 | 109 | 212 | 480 | 257 | 1,844 |
| **Atlas Oil Co. of Utica** | 7 | 1 | — | — | — | — | — | — | 7 | — | — |
| **Automatic Comfort Corp.** | 54 | 1 | — | — | — | — | — | 54 | — | — | — |
| **Bagwell Oil Co. (d)** | 16 | 2 | — | — | — | — | — | — | — | — | — |
| Best Oil, Inc. | 19 | 1 | — | — | — | — | — | — | — | — | 19 |
| Bi-Rite Development | 21 | 1 | — | — | — | — | — | — | — | — | 21 |
| Bonded Oil | 247 | 4 | — | — | — | — | — | — | — | — | — |
| **Bray Terminals, Inc.** | 54 | 1 | — | — | — | — | — | — | 54 | — | — |
| **Browning Oil Co.** | 23 | 1 | — | — | — | — | — | — | — | — | — |
| **Bursaw Oil Corp. (xxx)** | 50 | 2 | — | 5 | — | 45 | — | — | — | — | — |
| By-Lo Oil Co. | 55 | 1 | — | — | — | — | — | — | — | — | — |
| Cel Oil Products Corp. (e) | 20 | 1 | — | — | — | — | — | — | — | — | — |
| CENEX | 1,001 | 11 | — | — | — | — | — | — | — | — | — |
| **Certified Oil Co.** | 215 | 3 | — | — | — | — | — | — | — | — | — |
| **Champion Petroleum Co. (xxx)** | 863 | 18 | — | — | — | — | — | — | — | — | — |
| **Charter Oil Co.** | 430 | 12 | — | — | — | — | — | — | — | — | — |
| Cheker Oil Co. | 405 | 18 | — | — | — | — | — | — | — | — | 10 |
| Chevron U.S.A., Inc. | 12,748 | 39 | 110 | 27 | 34 | 69 | 5 | 226 | 429 | 254 | 180 |
| Citadel Corp. | 11 | 3 | — | — | — | — | — | — | — | — | — |
| **Cities Service Co.** | 5,784 | 31 | 106 | 57 | 79 | 403 | 88 | 107 | 333 | 268 | 280 |
| **Coen Oil Co.** | 300 | 3 | — | — | — | — | — | — | — | — | 100 |
| **Colonial Oil Industries, Inc. (f)** | 465 | 6 | — | — | — | — | — | — | — | — | — |
| Como Oil Co. | 30 | 1 | — | — | — | — | — | — | — | — | — |
| Conna Corp. (g) | 310 | 13 | — | 10 | 16 | — | — | 6 | 17 | — | — |
| Conoco, Inc. | 4,885 | 28 | — | — | — | — | — | — | — | — | — |
| **Consumers Gasoline Stations** | 34 | 2 | — | — | — | — | — | — | — | — | — |
| **Consumers Oil Corp.** | 16 | 2 | — | — | — | — | — | — | — | 13 | 3 |
| **Crown Central Petroleum Corp.** | 215 | 9 | — | — | — | — | — | — | 30 | 14 | 2 |
| Cray Energy, Inc. | 47 | 3 | 1 | 24 | 22 | — | — | — | — | — | — |
| Crystal Flash Petroleum Corp. (xxx) | 36 | 2 | — | — | — | — | — | — | — | — | — |
| Crystal U.S.A. Oil Co. | 177 | 9 | — | — | — | — | — | — | — | — | — |
| **C.S.C. Oil Corp.** | 23 | 2 | — | — | — | — | — | — | — | — | — |
| **Dead River Co.** | 135 | 2 | 122 | 13 | — | — | — | — | — | — | — |
| **De Blois Oil Co. (ee)** | 43 | 2 | — | — | — | 8 | 35 | — | — | — | — |
| Delta Marketing Co. (xxx) | 252 | 9 | — | — | — | — | — | — | — | — | — |
| Derby Refining Co. | 550 | 12 | — | — | — | — | — | — | — | — | — |
| Direct Oil Corp. (xxx) | 156 | 10 | — | — | — | — | — | — | — | — | — |
| **Dividend Bonded Gas** | 12 | 3 | — | — | — | — | — | — | — | — | — |
| **Dixie Oil Co.** | 97 | 3 | — | — | — | — | — | — | — | — | — |
| **Dominion Oil Co.** | 28 | 1 | — | — | — | — | — | — | — | — | — |
| Don Foster Oil Co. | 48 | 1 | — | — | — | — | — | — | — | — | — |
| Drake's Refinery Stations, Inc. | 14 | 1 | — | — | — | — | — | — | — | — | — |
| East Coast Oil Corp. | 30 | 1 | — | — | — | — | — | — | — | — | — |
| **Elm City Filling Stations, Inc.** | 60 | 1 | — | — | — | — | — | 60 | — | — | — |
| **E.M. Bailey Dist. Co. (xxx)** | 135 | 2 | — | — | — | — | — | — | — | — | — |
| **Englefield Oil Co. (h)** | 134 | 2 | — | — | — | — | — | — | — | — | — |
| Exxon Co., U.S.A. | 20,585 | 40 | 283 | 134 | 109 | 330 | 49 | 194 | 978 | 922 | 1,193 |
| Farm Stores, Inc. | 60 | 1 | — | — | — | — | — | — | — | — | — |
| Farmland Industries, Inc. | 927 | 11 | — | — | — | — | — | — | — | — | — |
| **FCX, Inc.** | 106 | 2 | — | — | — | — | — | — | — | — | — |
| **Fireline Petroleum** | 407 | 10 | 19 | 25 | — | 104 | 36 | 50 | 47 | 25 | 4 |
| **Fiaca Oil Co., Inc.** | 104 | 23 | — | — | — | — | 1 | 3 | — | 4 | 10 |
| Don Foster Oil Co. | 39 | 1 | — | — | — | — | — | — | — | — | — |
| Gas-N-Go, Inc. | 1 | 1 | — | — | — | — | — | — | — | — | — |
| Getty Refining & Marketing Co. | 4,700 | 28 | 120 | 52 | 75 | 268 | 51 | 156 | 625 | 472 | 222 |
| **Globe Oil Co., U.S.A (xxx)** | 59 | 4 | — | — | — | — | — | — | — | — | — |
| **Golden Imperial** | 47 | 1 | — | — | — | — | — | — | — | — | — |
| **Golub Service Station Corp.** | 15 | 2 | — | — | — | 1 | — | — | 14 | — | — |
| Great River Oil Co. | 88 | 2 | — | — | — | — | — | — | — | — | — |
| Gresham Petroleum Co. | 15 | 1 | — | — | — | — | — | — | — | — | — |
| Growmark, Inc. (xxx) | 160 | 4 | — | — | — | — | — | — | — | — | — |
| **Gulf Oil Corp.** | 13,870 | 30 | 195 | 91 | 76 | 352 | 72 | 111 | 983 | 637 | 730 |
| **Guttman Oil Co. (xxx)** | 75 | 3 | — | — | — | — | — | — | — | — | NA |
| **Higgins Oil Co., Inc.** | 22 | 1 | — | — | — | — | — | — | — | — | — |
| Highway Oil, Inc. (xxx) | 223 | 26 | — | 2 | 2 | — | — | — | 23 | — | 29 |
| Angus J. Hines, Inc. | 103 | 1 | — | — | — | — | — | — | — | — | — |
| Holland Oil Co. (xxx) | 34 | 1 | — | — | — | — | — | — | — | — | — |
| **Hop-In Food Stores, Inc.** | 134 | 3 | — | — | — | — | — | — | — | — | — |
| **Hudson Oil Co. (xxx)** | 305 | 29 | — | — | — | — | — | — | 16 | — | 8 |
| **Huges Oil Co.** | 123 | 2 | — | — | — | — | — | — | — | — | — |
| Hull Oil Co. | 15 | 2 | — | — | — | — | — | — | — | — | — |

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(xxx) 1980 data: Companies failed to respond to 1981 questionnaire.

(a) Includes American Petrofina Marketing, Inc., Dujax Fina Oil Co., Porto Fina Oil Co., & Tambay Fina Oil Co.

(b) Includes Gasamat Oil Corp. of Colorado.

(c) Includes Prestige Stations, Inc. Data as of 12/21/81.

(d) Includes Fulcher & Martin.

(e) Includes Gas-Up, Inc.

(f) Includes Colonial Interstate, Inc. & Interstate Stations, Inc.

(g) Includes Convenient Gasoline & Petro Oil Co.

(h) Includes Eagle Oil Co., Morral Oil Co., & River Oil Co.

(i) Includes Flying J, Vista, & Westland.

(j) Includes Jr. Food Mart of Texas, Inc.

(k) Includes North Iowa Oil & Tri-Iowa Oil.

(l) Subsidiary or affiliated. Includes Martin-4-Min. Auto Salon, Inc. & Martin Oil of Indiana, Inc.

(m) Includes Peninsular Petroleum Co.

(n) Includes Stop-N-Go, Hot Stop, Shop-N-Go, & PDO.

(o) Includes Barach-Fords Oils, & City Oil Co.

(p) Includes Pester Marketing Northern, & Pester Marketing Southern.

(q) Includes Aero Oil Co.

# in the United States

| South Atlantic | | | | | | | | | East North Central | | | | | East South Central | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Del. | Md. | D.C. | Va. | W.Va. | N.C. | S.C. | Ga. | Fla. | Ohio | Ind. | Ill. | Mich. | Wis. | Ky. | Tenn. | Ala. | Miss. |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | 94 | 199 | 606 | 578 | — | — | 3 | — | — | 1 | 160 | 109 | 29 |
| 37 | 396 | 51 | 810 | 358 | 1,205 | 560 | 896 | 793 | 520 | 796 | 1,491 | 1,156 | 687 | 145 | 953 | 889 | 436 |
| — | — | — | 3 | — | — | — | — | — | 1 | — | 1 | — | — | — | — | — | — |
| — | — | — | 2 | 42 | — | — | — | — | 62 | 5 | 2 | — | — | 135 | — | — | — |
| 86 | 163 | 5 | 264 | 48 | 1 | — | — | — | 213 | 108 | 366 | 92 | 69 | — | 2 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 1 | — | 15 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | 13 | — | — | — | — | 165 | 38 | — | — | — | 31 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 23 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | 55 | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 15 | — | — | — | — | — |
| — | — | — | — | — | — | 20 | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | 124 | — | — | — | — |
| — | — | — | — | 14 | — | — | — | — | 196 | — | — | — | — | 5 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | 43 | 9 | 2 | 3 | 9 | 6 | — | — |
| — | — | — | 13 | 2 | 11 | 7 | 12 | 59 | — | — | — | — | — | 29 | 9 | 10 | 71 |
| — | 1 | — | — | — | — | — | 5 | 44 | 9 | 72 | 48 | 47 | 9 | 9 | 3 | 2 | 5 |
| 17 | 49 | 2 | 13 | 57 | 52 | 117 | 1,234 | 1,215 | 4 | 8 | 0 | 0 | 0 | 1,170 | 107 | 1,209 | 689 |
| — | 2 | 8 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 119 | 2 | 201 | 5 | 570 | 197 | 306 | 599 | 35 | 161 | 215 | 57 | 216 | 4 | 227 | 531 | 156 |
| — | — | — | — | 15 | — | — | — | — | 185 | — | — | — | — | — | — | — | — |
| — | — | — | — | — | 24 | 201 | 213 | 1 | — | — | — | — | — | — | 15 | 1 | — |
| — | — | — | — | — | — | — | — | 30 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | 15 | — | — | 13 | 16 | 23 | 29 | — | — | 141 | 19 | — | — |
| — | — | — | — | — | — | — | — | 2 | — | 49 | 127 | 17 | 133 | 27 | — | 23 | 46 |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 6 | 28 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 45 | 2 | 37 | — | 21 | 4 | 47 | — | — | — | — | — | — | — | — | 15 | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | 16 | — | 20 | — | — | — | — | — |
| — | — | — | — | — | — | — | 3 | 40 | — | — | — | — | — | 1 | 14 | 84 | 15 |
| — | — | — | — | — | — | — | — | — | 14 | — | — | — | — | 9 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | 1 | 9 | 12 | — | — | — | — | — | 32 | 101 | 40 | 7 |
| — | — | — | 8 | 4 | 15 | 11 | 2 | 52 | — | — | — | — | — | 10 | 32 | 18 | 4 |
| — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — |
| — | — | — | — | — | — | — | 65 | 30 | — | — | — | — | — | — | — | 2 | — |
| — | — | — | 28 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 48 | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 14 | — | — | — | — | — |
| — | — | — | 30 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | 5 | — | — | 130 | — | — | — |
| — | — | — | — | — | — | — | — | — | 102 | — | — | 32 | — | — | — | — | — |
| 74 | 531 | 60 | 1,183 | 546 | 2,104 | 1,083 | 725 | 611 | 182 | 2 | — | — | — | 206 | 1,094 | 478 | 267 |
| — | — | — | — | — | — | — | — | 60 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | 90 | 16 | — | — | — | — | — | — | — | — | — | — | — |
| 4 | — | — | — | — | — | — | — | 93 | — | — | — | — | — | — | — | — | — |
| — | 5 | — | 13 | — | — | — | 4 | — | 6 | 1 | 5 | 9 | 2 | 1 | 1 | 1 | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 39 | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — |
| 77 | 78 | — | — | — | — | — | — | — | — | — | 98 | 6 | 125 | — | — | — | — |
| — | — | — | — | — | 2 | 10 | 40 | 7 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | 47 | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | 4 | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 15 |
| — | — | — | — | — | — | — | — | — | — | — | 89 | — | 10 | — | — | — | — |
| 33 | 223 | 31 | 816 | 331 | 1,195 | 603 | 1,070 | 710 | 617 | 50 | — | 220 | — | 582 | 955 | 745 | 560 |
| — | — | — | — | NA | — | — | — | — | NA | — | — | — | — | — | — | — | — |
| — | — | — | 22 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 4 | — | — | 7 | — | — | 2 | 30 | 33 | 8 | 1 | 3 | — | 8 | 7 | 2 | 2 |
| — | — | — | 103 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | — | — |
| — | — | — | 70 | — | 43 | — | — | — | — | — | — | — | — | — | 21 | — | — |
| — | 6 | — | 5 | 1 | — | — | 9 | 25 | 7 | 12 | 5 | 8 | 12 | 4 | 4 | 8 | 1 |
| — | — | — | — | — | — | — | (x) | (x) | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | 13 | — | — | — | — | — | — | — | 2 | — |

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(r) Includes Sylvarin Oil, & White Flash Oil.
(s) Includes Q Oil Co. of Elizabeth City, Greenville, Hickory, Mt. Airy, Salisbury, Statewide, Southern Pines, Inc., & Gas House Company.
(t) Includes Corner Food Stores, Inc.
(u) Includes Masoil, Inc., Thrifty Petroleum, Camellia State Petroleum, & Maverick Oil, Inc.
(v) Includes Lil' Feller.
(w) Includes John G. Stumpf, Inc.
(x) Company markets in these states, but numbers are not available.
(y) Includes Autotronic Systems, Inc.
(z) Includes Omega Oil Co. (62).

(aa) Includes Boron Oil Company & BP Oil Inc.
(bb) Includes Etna Service Stations.
(cc) Includes Direct Oil Corp., Q-S Petroleum, Inc., Red Diamond Oil Company, & TLC Oil Company.
(dd) Includes Town Pump, & Gas-A-Matic.
(ee) Includes Beacon Oil Co.
(ff) Includes Sello, Reelo; Hi-Val, Big-Bi; & Lo-Lo.
(A) Estimated.
(B) Numbers not available.
Source: NPN questionnaires
†Includes District of Columbia

## Branded Retail Outlets (cont'd.)

| Company | TOTAL BRANDED RETAIL OUTLETS | TOTAL NUMBER OF STATES WHERE GASOLINE BRAND IS MARKETED† | New England | | | | | | Middle Atlantic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Maine | N.H. | Vt. | Mass. | R.I. | Conn. | N.Y. | N.J. | Pa. |
| **Johnson Products** | 95 | 6 | 45 | 20 | 5 | 10 | 5 | — | 10 | — | — |
| **J. & L. Oil, Inc. (xxx)** | 90 | 8 | — | — | — | — | — | — | 6 | — | — |
| **Kelley-Williamson Co. (xxx)** | 50 | 2 | — | — | — | — | — | — | — | — | — |
| Kerr-McGee Refining Corp. (xxx) | 1,431 | 17 | — | — | — | — | — | — | — | — | — |
| Key Petroleum, Inc. | 398 | 6 | — | — | — | — | — | — | — | — | — |
| Kickapoo Oil Co., Inc. | 70 | 1 | — | — | — | — | — | — | — | — | — |
| **Kimber-Allen Petroleum Corp.** | 150 | 1 | — | — | — | — | — | — | — | 150 | — |
| **Kimbro Oil** | 40 | 1 | — | — | — | — | — | — | — | — | — |
| **Kirschner Bros. Oil Co. (xxx)** | 50 | 2 | — | — | — | — | — | — | — | 15 | 35 |
| Lake Shore Oil Co. | 30 | 1 | — | — | — | — | — | — | — | — | — |
| Lehigh Oil Co., Inc. (xxx) | 26 | 4 | — | 4 | 4 | — | 6 | 12 | — | — | — |
| Lido Co., of New England | 108 | 3 | 58 | 28 | — | 22 | — | — | — | — | — |
| **Main Bros. Oil Co., Inc.** | 30 | 1 | — | — | — | — | — | — | 30 | — | — |
| **Marathon Oil Co.** | 2,146 | 6 | — | — | — | — | — | — | — | — | — |
| **Marshall Oil Co.** | 50 | 1 | — | — | — | — | — | — | — | — | — |
| Martin Oil Service, Inc. (l) | 146 | 13 | — | — | — | — | — | — | — | 3 | — |
| Mauger & Co. (xxx) | 66 | 3 | — | — | — | — | — | — | — | — | 63 |
| McDowell Oil Service, Inc | 28 | 1 | — | — | — | — | — | — | — | — | 28 |
| **Merit Oil Corp.** | —(B) | 11 | — | (x) | — | (x) | (x) | (x) | (x) | (x) | (x) |
| **Mico Oil Co., Inc.** | 28 | 14 | — | — | — | — | — | — | — | 1 | — |
| **Midland Cooperatives, Inc.** | 276 | 5 | — | — | — | — | — | — | — | — | — |
| Mid-States Petroleum, Inc. | 46 | 2 | — | — | — | — | — | — | — | — | — |
| Miller Enterprises, Inc. (m) | 90 | 1 | — | — | — | — | — | — | — | — | — |
| Miller & Holmes, Inc. | 29 | 10 | — | — | — | — | — | — | 1 | — | — |
| **The Miller Oil Co.** | 12 | 2 | — | — | — | — | — | — | — | — | — |
| **Mobil Oil Corp. (ff)** | 16,564 | 45 | 255 | 161 | 127 | 698 | 97 | 496 | 2,173 | 458 | 1,273 |
| **Monarch Oil & Supply Co.** | 25 | 1 | — | — | — | — | — | — | — | — | — |
| Munford, Inc. | 463 | 13 | — | — | — | — | — | — | — | — | — |
| Murphy Oil Corp. | 767 | 14 | — | — | — | — | — | — | — | — | — |
| National Convenience Stores, Inc. (n) | 131 | 39 | (x) | (x) | (x) | (x) | (x) | (x) | (x) | (x) | (x) |
| **R.B. Newman Fuel Corp.** | 12 | 1 | — | — | — | — | — | — | 12 | — | — |
| **Oasis Petroleum Corp. (xxx)** | 104 | 20 | 5 | — | — | — | 2 | — | 1 | — | 1 |
| **Parker Oil Co., Inc. (o)** | 175 | 2 | — | — | — | — | — | — | — | — | — |
| Penna. Petroleum Products Co. (xxx) | 1,558 | 20 | 120 | 67 | 50 | 275 | 35 | 30 | 160 | 110 | 160 |
| Pester Corp. (p) | 221 | 10 | — | — | — | — | — | — | — | — | — |
| Petroleum Sales & Service | 100 | 1 | — | — | — | — | — | — | 100 | — | — |
| **Phillips Fuel Co.** | 88 | 1 | — | — | — | — | — | — | — | 88 | — |
| **Phillips Petroleum Co. (q)** | 12,327 | 38 | — | — | — | — | — | — | — | — | 148 |
| **Piasa Motor Fuels, Inc.** | 22 | 2 | — | — | — | — | — | — | — | — | — |
| Pilot Oil Corp. | 94 | 8 | — | — | — | — | — | — | — | — | — |
| Port Oil, Inc. | 55 | 2 | — | — | — | — | — | — | — | — | — |
| Power Test Corp. | 502 | 5 | — | — | — | 28 | — | 28 | 382 | 62 | 2 |
| **Premium Petroleum Products, Inc.** | 50 | 1 | — | — | — | — | — | — | 50 | — | — |
| **Pride Brand Services, Inc.** | 5 | 1 | — | — | — | — | — | — | — | — | — |
| **Pride Oil Co., Inc. (Miss.)** | 25 | 2 | — | — | — | — | — | — | — | — | — |
| Pride Oil Co., Inc. (Tenn.) | 15 | 1 | — | — | — | — | — | — | — | — | — |
| Publix Oil Co., Inc. | 101 | 5 | — | — | — | — | — | — | — | — | — |
| W.H. Pugh Oil Co. (r) | 17 | 1 | — | — | — | — | — | — | — | — | — |
| **Quaker State Oil Ref. Corp.** | 329 | 4 | — | — | — | — | — | — | 46 | — | 171 |
| **Quality Oil Co. (s)** | 164 | 2 | — | — | — | — | — | — | — | — | — |
| **Racetrac Petroleum, Inc.** | 125 | 12 | — | — | — | — | — | — | — | — | — |
| Red Hed Oil Co. | 27 | 1 | — | — | — | — | — | — | — | — | — |
| Reinhardt Oil Corp. (t) | 32 | 1 | — | — | — | — | — | — | 32 | — | — |
| Remote Services, Inc. (xxx) | 301 | 13 | — | 10 | 16 | — | — | 6 | 16 | — | — |
| **Research Fuels, Inc. (xxx)** | 74 | 8 | — | — | — | — | — | — | — | — | — |
| **Reynolds Industries** | 12 | 2 | 2 | — | — | 10 | — | — | — | — | — |
| **Rich Distributors, Inc. (xxx)** | 37 | 3 | — | — | — | — | — | — | — | — | — |
| River Oil Co. (xxx) | 32 | 2 | — | — | — | — | — | — | — | — | — |
| Romaco, Inc. (u) | 187 | 6 | — | — | — | — | — | — | — | — | — |
| Santee Oil Co., Inc. | 62 | 1 | — | — | — | — | — | — | — | — | — |
| **Sav-Mor Oil Co.** | 100 | 14 | — | — | — | — | — | — | 1 | 1 | — |
| **Self Service Oil Co.** | 19 | 4 | — | — | — | — | — | — | — | — | — |
| **Seminole Asphalt Refining Co.** | 26 | 3 | — | — | — | — | — | — | — | — | — |
| Shelby Petroleum Corp. | 20 | 2 | — | — | — | — | — | — | — | — | — |
| Shell Oil Co. | 13,665 | 36 | — | 9 | — | 211 | 49 | 149 | 361 | 224 | 11 |
| Shotmeyer Bros. Petroleum Corp. | 60 | 1 | — | — | — | — | — | — | — | 60 | — |
| **Shotmeyer Oil Corp.** | 41 | 3 | — | — | — | — | — | — | 1 | 39 | — |
| **The Sico Co. (w)** | 155 | 4 | — | — | — | — | — | — | — | 1 | 145 |
| **Sigmor Corp. (y)** | 577 | 20 | — | — | — | — | — | — | 4 | — | 18 |
| Simon Oil Co., Inc. | 65 | 1 | — | — | — | — | — | — | 65 | — | — |
| Sing Oil Co. (xxx) | 55 | 4 | — | — | — | — | — | — | — | — | — |
| Smith-Shafer Oil Co. | 10 | 3 | — | — | — | — | — | — | — | — | — |
| **Smo, Inc. (xxx)** | 120 | 2 | — | — | — | — | — | — | — | — | — |
| **Somerset Refinery (xxx)** | 46 | 2 | — | — | — | — | — | — | — | — | — |
| **South Central Oil Co. (xxx)** | 182 | 16 | — | — | — | — | — | — | — | — | — |
| Southeastern Petroleum Sales Corp. | 50 | 2 | — | — | — | — | — | — | — | — | — |
| The Spencer Companies, Inc. (xxx) | 84 | 1 | — | — | — | — | — | — | — | — | — |
| M. Spiegel & Sons Oil Corp. | 25 | 2 | — | — | — | — | — | — | 23 | 2 | — |
| **The Standard Oil Co. (Ohio) (aa)** | 3,965 | 19 | (x) | (x) | (x) | (x) | (x) | (x) | (x) | (x) | (x) |
| **J. D. Streett & Co., Inc.** | 356 | 5 | — | — | — | — | — | — | — | — | — |
| **Star Oil Co.** | 55 | 1 | — | — | — | — | — | — | — | — | — |

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(xxx) 1980 data: Companies failed to respond to 1981 questionnaire.

(a) Includes American Petrofina Marketing, Inc., Dujax Fina Oil Co., Porto Fina Oil Co., & Tambay Fina Oil Co.

(b) Includes Gasamat Oil Corp. of Colorado.

(c) Includes Prestige Stations, Inc. Data as of 12/21/81.

(d) Includes Fulcher & Martin.

(e) Includes Gas-Up, Inc.

(f) Includes Colonial Interstate, Inc. & Interstate Stations, Inc.

(g) Includes Convenient Gasoline & Petro Oil Co.

(h) Includes Eagle Oil Co., Morral Oil Co., & River Oil Co.

(i) Includes Flying J, Vista, & Westland.

(j) Includes Jr. Food Mart of Texas, Inc.

(k) Includes North Iowa Oil & Tri-Iowa Oil.

(l) Subsidiary or affiliated. Includes Martin-4-Min. Auto Salon, Inc. & Martin Oil of Indiana, Inc.

(m) Includes Peninsular Petroleum Co.

(n) Includes Stop-N-Go, Hot Stop, Shop-N-Go, & PDO.

(o) Includes Barach-Fords Oils, & City Oil Co.

(p) Includes Pester Marketing Northern, & Pester Marketing Southern.

(q) Includes Aero Oil Co.

| South Atlantic | | | | | | | | | East North Central | | | | | East South Central | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Del. | Md. | D.C. | Va. | W.Va. | N.C. | S.C. | Ga. | Fla. | Ohio | Ind. | Ill. | Mich. | Wis. | Ky. | Tenn. | Ala. | Miss. |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | 8 | — | — | 2 | 57 | — | 14 | 3 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | 45 | — | 5 | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | 59 | 125 | — | 94 | 1 | 14 | — | 16 |
| — | — | — | — | — | — | — | 20 | 208 | — | — | 1 | 1 | — | — | — | 63 | 39 |
| — | — | — | — | — | — | — | — | — | — | — | — | — | 70 | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 40 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | 30 | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | 635 | 589 | 278 | 506 | 18 | 120 | — | — | — |
| — | — | — | — | — | 50 | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | 7 | — | 33 | 22 | 49 | 13 | 5 | — | — | — | — |
| 2 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| (x) | (x) | (x) | (x) | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 1 | — | — | — | — | — | 8 | — | 3 | 1 | — | 1 | 1 | 1 | 1 |
| — | — | — | — | — | — | — | — | — | — | — | — | 10 | 115 | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | 1 | — | 45 | — | — | — | — | — |
| — | — | — | — | — | — | — | — | 90 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | 1 | — | — | — | 1 | 1 | — | — | — | — |
| — | — | — | — | — | — | — | — | — | 10 | — | — | 2 | — | — | — | — | — |
| 38 | 151 | 2 | 185 | 34 | 432 | 66 | 69 | 323 | 349 | 243 | 618 | 807 | 712 | 30 | 431 | 42 | 1 |
| — | — | — | — | — | — | — | — | — | — | 25 | — | — | — | — | — | — | — |
| — | — | — | 24 | — | 15 | 45 | 94 | 72 | — | — | — | — | — | 8 | 21 | 32 | 26 |
| — | — | — | 14 | — | 23 | 13 | 53 | 170 | — | — | — | 35 | 87 | 14 | 74 | 141 | 26 |
| (x) | (x) | (x) | (x) | (x) | (x) | (x) | — | — | (x) | (x) | (x) | (x) | (x) | — | (x) | (x) | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 2 | — | 3 | — | 4 | 1 | 6 | 18 | 21 | — | 12 | — | — | 1 | 1 | 5 | 1 |
| — | — | — | 170 | — | 5 | — | — | — | — | — | — | — | — | — | — | — | — |
| 27 | 138 | 40 | 27 | — | 50 | 45 | 14 | 14 | 60 | 120 | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | 1 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 122 | — | 367 | 34 | 959 | 459 | 383 | 577 | 137 | 500 | 591 | 144 | 302 | 159 | 457 | 335 | 267 |
| — | — | — | — | — | — | — | — | — | — | — | 20 | — | — | — | — | — | — |
| — | — | — | 14 | 1 | 9 | — | 11 | 10 | — | — | — | — | — | 10 | 37 | 2 | — |
| — | — | — | — | — | 20 | 36 | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 5 | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 3 | 22 |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 15 | — | — |
| — | — | — | 1 | — | — | 2 | 15 | — | — | — | — | — | — | 4 | 79 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | 17 | — | — | — | — |
| — | — | — | — | 52 | — | — | — | — | 60 | — | — | — | — | — | — | — | — |
| — | — | — | 3 | — | 161 | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 5 | — | 4 | 4 | 29 | 23 | — | — | — | — | — | — | 5 | 38 | 2 |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 27 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | 16 | — | — | 11 | 14 | 20 | 27 | — | — | 142 | 19 | — | — |
| — | — | — | — | — | 2 | 2 | 2 | — | — | — | — | — | — | — | 6 | 8 | 2 |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | 17 | — | — | — | — | 10 | — | — | — | — | 10 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | NA | NA |
| — | — | — | — | — | — | 2 | 40 | 9 | — | — | — | — | — | — | 8 | 125 | 3 |
| — | — | — | — | — | — | 62 | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 1 | — | — | — | — | — | — | — | — | — | — | 1 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | 3 | — | 9 | — | — | — | — |
| — | — | — | — | — | — | — | 2 | 21 | — | — | — | — | — | — | — | 3 | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 11 | 9 | — | — |
| 1 | 164 | 13 | 102 | — | 1 | 1 | 67 | 365 | 329 | 201 | 475 | 299 | 64 | 51 | 60 | 54 | 2 |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 8 | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 19 | — | 2 | 4 | 2 | 4 | — | — | — | 3 | — | 1 | 5 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | 43 | 8 | — | — | — | — | — | — | — | 1 | 3 |
| — | — | — | — | — | — | — | — | 2 | — | — | 6 | — | 2 | — | — | — | — |
| 15 | 105 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | 1 | — | — | — | 42 | 3 | — | — |
| — | — | — | — | — | — | — | — | 2 | — | 16 | 8 | 3 | 4 | 9 | 22 | 5 | 24 |
| — | — | — | — | — | — | 30 | 20 | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 84 | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| (x) | (x) | (x) | (x) | (x) | (x) | — | — | — | (x) | (x) | — | (x) | — | (x) | — | — | — |
| — | — | — | — | — | — | — | — | — | 1 | — | 143 | — | — | 29 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 55 | — | — | — | — | — |

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(r) Includes Sylvarin Oil, & White Flash Oil.

(s) Includes Q Oil Co. of Elizabeth City, Greenville, Hickory, Mt. Airy, Salisbury, Statewide, Southern Pines, Inc., & Gas House Company.

(t) Includes Corner Food Stores, Inc.

(u) Includes Masoil, Inc., Thrifty Petroleum, Camellia State Petroleum, & Maverick Oil, Inc.

(v) Includes Lil' Feller.

(w) Includes John G. Stumpf, Inc.

(x) Company markets in these states, but numbers are not available.

(y) Includes Autotronic Systems, Inc.

(z) Includes Omega Oil Co. (62).

(aa) Includes Boron Oil Company & BP Oil Inc.

(bb) Includes Etna Service Stations.

(cc) Includes Direct Oil Corp., Q-S Petroleum, Inc., Red Diamond Oil Company, & TLC Oil Company.

(dd) Includes Town Pump, & Gas-A-Matic.

(ee) Includes Beacon Oil Co.

(ff) Includes Sello, Reelo; Hi-Val, Big-Bi; & Lo-Lo.

(A) Estimated.

(B) Numbers not available.

Source: NPN questionnaires

†Includes District of Columbia

## Branded Retail Outlets (cont'd.)

| Company | TOTAL BRANDED RETAIL OUTLETS | TOTAL NUMBER OF STATES WHERE GASOLINE BRAND IS MARKETED† | New England | | | | | | Middle Atlantic | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Maine | N.H. | Vt. | Mass. | R.I. | Conn. | N.Y. | N.J. | Pa. |
| **Star Service & Petroleum Co.** | 186 | 17 | — | — | — | — | — | — | — | — | — |
| **Sun Co.** | 8,361 | 33 | 93 | 70 | 57 | 340 | 82 | 137 | 986 | 632 | 997 |
| **Sunmark Industries (xxx)** | 9,433 | 37 | 88 | 65 | 38 | 344 | 87 | 135 | 1,004 | 654 | 1,056 |
| Sunshine JR Stores, Inc. | 307 | 5 | — | — | — | — | — | — | — | — | — |
| Tanner Oil Co. (xxx) | 90 | 3 | — | — | — | — | — | — | — | — | — |
| Taylor Oil Co. (bb) | 56 | 2 | — | — | — | — | — | — | — | — | — |
| **Tenneco Oil Co. (cc)** | 484 | 17 | — | — | — | 1 | — | 3 | 1 | — | 1 |
| **Texaco Inc.** | 22,490 | 50 | 230 | 112 | 96 | 552 | 133 | 331 | 911 | 537 | 1,346 |
| **Thornhill Oil Co., Inc.** | 20 | 1 | — | — | — | — | — | — | — | — | — |
| Thornton Oil Corp. | 100 | 18 | — | — | — | — | — | 4 | 5 | 1 | 1 |
| Tommy Oil Co., Inc. | 36 | 12 | — | — | — | — | — | — | 5 | — | 7 |
| Total Petroleum, Inc. | 1,893 | 22 | — | — | — | — | — | — | — | — | — |
| **Travelers Petroleum, Inc.** | 79 | 3 | — | — | — | — | — | — | — | — | — |
| **Trenton Oil Co.** | 50 | 1 | — | — | — | — | — | — | — | 50 | — |
| **Tresler Oil Co. (xxx)** | 150 | 4 | — | — | — | — | — | — | — | — | — |
| Union Oil Co. of Calif. | 12,529 | 44 | — | — | — | — | — | 2 | 1 | 2 | 30 |
| United Refining Co. (xxx) | 691 | 4 | — | — | — | — | — | — | 226 | — | 399 |
| Wake Up Oil Co. | 42 | 1 | — | — | — | — | — | — | — | — | — |
| **Wareub Co., Inc.** | 84 | 6 | — | — | — | — | — | — | — | — | — |
| **Warren Equities** | 275 | 8 | 4 | 10 | — | 47 | 35 | 55 | 26 | 65 | 33 |
| **Webb Oil Co.** | 19 | 2 | — | — | — | — | — | — | — | — | — |
| Wesson | 12 | 1 | — | — | — | — | — | 12 | — | — | — |
| A. T. Williams Oil | 65 | 2 | — | — | — | — | — | — | — | — | — |
| J. H. Williams Oil Co., Inc. | 81 | 1 | — | — | — | — | — | — | — | — | — |
| **York Oil Co., Inc.** | 14 | 1 | — | — | — | — | — | — | — | — | — |
| **Zephyr, Inc.** | 84 | 2 | — | — | — | — | — | — | — | — | — |

| Company | TOTAL BRANDED RETAIL OUTLETS | TOTAL NUMBER OF STATES WHERE GASOLINE BRAND IS MARKETED† | West North Central | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | Minn. | Iowa | Mo. | N.D. | S.D. | Neb. | Kan. |
| **Ada Resources** | 207 | 1 | — | — | — | — | — | — | — |
| **American Petrofina, Inc. (a)** | 4,014 | 20 | — | 31 | 162 | — | 1 | 20 | 151 |
| **Amoco Oil Co.** | 20,061 | 46 | 665 | 425 | 591 | 154 | 270 | 217 | 316 |
| Apollo Oil Co. | 13 | 1 | — | — | — | — | — | — | — |
| Arkla Chemical Corp. | 7 | 3 | — | — | — | — | — | — | — |
| Armour Oil Co. | 34 | 11 | — | — | — | — | — | — | — |
| **Asamera Oil, Inc. U.S. (b)** | 110 | 11 | — | — | — | — | — | 1 | — |
| **Ashland Oil Co. of California** | 14 | 1 | — | — | — | — | — | — | — |
| **Atlantic Richfield Co. (c)** | 7,122(A) | 30 | — | — | 1 | — | — | — | — |
| Brennan Petroleum Products | 3 | 1 | — | — | — | — | — | — | — |
| Beacon Oil Co. | 267 | 2 | — | — | — | — | — | — | — |
| Caribou Four Corners | 60 | 10 | — | — | — | — | — | — | — |
| **CENEX** | 1,001 | 11 | 213 | — | — | 173 | 114 | 1 | — |
| **Champlin Petroleum Co. (xxx)** | 863 | 18 | 212 | 30 | — | 173 | 114 | 10 | — |
| **Charter Oil Co.** | 430 | 12 | — | — | — | — | — | — | — |
| Cheker Oil Co. | 405 | 18 | — | 8 | 27 | — | — | 3 | — |
| Chevron U.S.A., Inc. | 12,748 | 39 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |
| Circle K Corp. (xxx) | 736 | 11 | — | — | — | — | — | — | — |
| **Cities Service Co.** | 5,784 | 31 | — | — | 1 | — | — | — | — |
| **Conna Corp. (g)** | 310 | 13 | — | 2 | — | — | — | — | 3 |
| **Conoco, Inc.** | 4,885 | 28 | 175 | 236 | 303 | 25 | 48 | 268 | 209 |
| Consumers, Inc. (xxx) | 35 | 4 | — | 5 | — | — | — | — | 2 |
| Cook & Cooley, Inc. | 85 | 1 | — | — | — | — | — | — | — |
| Crystal U.S.A. Oil Co. | 177 | 9 | — | — | — | — | — | — | — |
| **Curtis Oil Co., Inc. (xxx)** | 47 | 1 | — | — | — | — | — | — | — |
| **Delta Marketing Co.** | 252 | 9 | — | — | — | — | — | — | — |
| **Derby Refining Co.** | 550 | 12 | 9 | 114 | 109 | — | 3 | 46 | 172 |
| Desert Oil Co. | 6 | 1 | — | — | — | — | — | — | — |
| Desert Petroleum, Inc. | | | | | | | | | |
| Diamond Shamrock Corp. | 1,579 | 12 | — | — | — | — | — | — | 16 |
| **Dividend Bonded Gas** | 12 | 3 | — | 5 | — | — | — | 6 | — |
| **Exxon Co. U.S.A.** | 20,585 | 40 | — | — | — | 70 | 8 | 2 | — |
| **Farmland Industries, Inc.** | 927 | 11 | 112 | 184 | 51 | 100 | 40 | 160 | 211 |
| Fisca Oil Co., Inc. | 104 | 23 | 1 | 2 | 5 | — | 1 | 3 | 2 |
| Franko Oil Co. | 104 | 3 | — | — | — | — | — | — | — |
| Flying J, Inc. (i) | 86 | 9 | — | — | — | 7 | — | — | — |
| **FS Services, Inc. (xxx)** | 160 | 4 | 2 | 59 | — | — | — | — | — |
| **Gasco Gasoline** | 134 | 1 | — | — | — | — | — | — | — |
| **General Oil Co.** | 54 | 2 | — | — | 4 | — | — | — | — |
| Getty Refining & Marketing Co. | 4,700 | 28 | 312 | 344 | 461 | 41 | 38 | 163 | 334 |
| Giant Industries, Inc. (xxx) | 20 | 3 | — | — | — | — | — | — | — |
| Great River Oil co. (xxx) | 88 | 2 | — | — | 84 | — | — | — | — |
| **Growmark, Inc. (xxx)** | 160 | 4 | 2 | 59 | — | — | — | — | — |
| **Gulf Oil Corp.** | 13,870 | 30 | — | — | — | — | — | — | — |

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(xxx) 1980 data: Companies failed to respond to 1981 questionnaire.

(a) Includes American Petrofina Marketing, Inc., Dujax Fina Oil Co., Porto Fina Oil Co., & Tambay Fina Oil Co.

(b) Includes Gasamat Oil Corp. of Colorado.

(c) Includes Prestige Stations, Inc. Data as of 12/21/81.

(d) Includes Fulcher & Martin.

(e) Includes Gas-Up, Inc.

(f) Includes Colonial Interstate, Inc. & Interstate Stations, Inc.

(g) Includes Convenient Gasoline & Petro Oil Co.

(h) Includes Eagle Oil Co., Morral Oil Co., & River Oil Co.

(i) Includes Flying J, Vista, & Westland.

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(l) Subsidiary or affiliated. Includes Martin-4-Min. Auto Salon, Inc. & Martin Oil of Indiana, Inc.

(m) Includes Peninsular Petroleum Co.

(n) Includes Stop-N-Go, Hot Stop, Shop-N-Go, & PDO.

(o) Includes Barach-Fords Oils, & City Oil Co.

(p) Includes Pester Marketing Northern, & Pester Marketing Southern.

(q) Includes Aero Oil Co.

| South Atlantic | | | | | | | | | East North Central | | | | | East South Central | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Del. | Md. | D.C. | Va. | W.Va. | N.C. | S.C. | Ga. | Fla. | Ohio | Ind. | Ill. | Mich. | Wis. | Ky. | Tenn. | Ala. | Miss. |
| — | — | — | — | (x) | (x) | (x) | (x) | (x) | (x) | — | — | — | — | (x) | (x) | (x) | (x) |
| 38 | 232 | 20 | 190 | 124 | 429 | 304 | 60 | 209 | 865 | 353 | 348 | 471 | — | 233 | 66 | 60 | — |
| 28 | 203 | 20 | 191 | 98 | 459 | 274 | 62 | 206 | 928 | 418 | 376 | 481 | 44 | 282 | 216 | 61 | 30 |
| — | — | — | — | — | — | — | 20 | 122 | — | — | — | — | — | — | — | 126 | 29 |
| — | — | — | — | 25 | — | — | — | — | 40 | — | — | — | — | 25 | — | — | — |
| — | — | — | 9 | — | 47 | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 12 | 4 | 29 | 45 | 61 | 130 | — | — | — | — | — | 11 | 54 | 23 | 10 |
| 69 | 403 | 22 | 1,330 | 50 | 1,260 | 574 | 768 | 424 | 20 | 329 | 674 | 107 | 77 | 379 | 841 | 835 | 529 |
| — | — | — | — | — | — | — | — | — | 20 | — | — | — | — | — | — | — | — |
| — | 1 | — | 6 | 1 | 12 | 4 | 5 | 7 | 11 | 11 | 7 | 2 | — | 12 | 3 | — | — |
| — | 1 | — | 1 | 1 | — | — | 1 | 4 | 9 | — | — | — | — | — | 1 | 1 | — |
| — | — | — | — | — | — | — | — | — | 3 | 5 | 13 | 520 | 30 | 3 | 21 | 5 | — |
| — | — | — | — | — | — | 66 | 8 | 5 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| | | | | | | | | | NA | NA | — | — | — | NA | NA | — | — |
| 27 | 40 | — | 558 | 213 | 1,083 | 415 | 730 | 852 | 596 | 395 | 343 | 552 | 351 | 155 | 572 | 1,214 | 504 |
| 3 | — | — | — | — | — | — | — | — | 63 | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | 42 | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | 8 | — | 4 | 54 | — | — | — | 1 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | 1 | — | — | — | 18 | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 25 | — | 40 | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | 81 | — | — | — | — | — | — | — | — | — |
| — | — | — | 14 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 80 | 4 | — | — | — | — |

| West South Central | | | | Mountain | | | | | | | | Pacific | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ark. | La. | Okla. | Texas | Mont. | Idaho | Wyo. | Colo. | N.M. | Ariz. | Utah | Nev. | Wash | Ore. | Calif. | Alaska | Hawaii |
| — | — | — | 207 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 151 | 89 | 142 | 1,347 | — | — | — | — | 139 | 2 | — | — | — | — | — | — | — |
| 295 | 725 | 75 | 411 | 118 | 100 | 110 | 279 | 18 | — | 116 | 3 | 18 | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 13 | — | — |
| 4 | 2 | — | 1 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | 1 | — | — | — | 1 | — | — | — | — | 1 | 1 | 1 | 22 | — | 1 |
| — | — | — | — | 5 | 6 | 10 | 38 | 11 | 5 | 10 | 3 | 10 | — | 11 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 14 | — | — |
| — | — | — | — | — | 2 | — | — | 3 | 51 | 14 | 47 | 403 | 321 | 1,503 | — | 55 |
| — | — | — | — | — | — | — | — | — | 3 | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | 5 | 262 | — | — |
| — | — | — | — | 4 | 13 | 14 | 1 | 5 | 7 | 8 | 4 | 1 | 3 | — | — | — |
| — | — | — | — | 129 | 56 | 9 | — | — | — | 19 | — | 103 | 60 | — | — | — |
| — | — | — | — | 129 | 56 | 9 | — | — | — | 26 | — | 79 | 59 | — | — | — |
| — | 88 | — | 119 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 0 | 2 | 0 | 228 | 63 | 167 | 40 | 146 | 266 | 265 | 174 | 136 | 628 | 432 | 2,568 | 173 | 179 |
| — | — | 31 | 122 | 32 | 38 | — | 17 | 75 | 214 | 21 | 11 | 13 | — | 162 | — | — |
| 169 | 268 | 29 | 104 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 210 | 451 | 407 | 824 | 287 | 154 | 86 | 349 | 153 | 28 | 139 | — | 103 | 6 | — | — | — |
| 4 | — | 24 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 85 | — | — |
| 4 | 14 | — | 2 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 47 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 16 | 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 9 | — | 30 | 8 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | 6 | — | — | — | — | — | — | — | — | — | — |
| | | | | | | | | | | | | | | | | |
| 6 | 26 | 75 | 1,143 | — | 5 | 21 | 115 | 106 | 7 | 58 | 1 | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 767 | 962 | 98 | 2,716 | 294 | 34 | 29 | 121 | 181 | 292 | 20 | 47 | 290 | 161 | 1,155 | — | — |
| — | — | — | — | 2 | 1 | 6 | 60 | — | — | — | — | — | — | — | — | — |
| — | — | — | 21 | — | — | — | 3 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 26 | 72 | 6 | — | — |
| — | — | — | — | 7 | 8 | 1 | — | — | — | 13 | 2 | 24 | 7 | 17 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 134 | — | — |
| 50 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 6 | — | 313 | 10 | — | — | 3 | 92 | — | 7 | — | — | — | — | 151 | — | — |
| — | — | — | 3 | — | — | — | — | 2 | 15 | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 42 | 213 | 24 | 1,615 | — | — | — | — | 8 | — | — | — | — | — | — | — | — |

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(r) Includes Sylvarin Oil, & White Flash Oil.
(s) Includes Q Oil Co. of Elizabeth City, Greenville, Hickory, Mt. Airy, Salisbury, Statewide, Southern Pines, Inc., & Gas House Company.
(t) Includes Corner Food Stores, Inc.
(u) Includes Masoil, Inc., Thrifty Petroleum, Camellia State Petroleum, & Maverick Oil, Inc.
(v) Includes Lil' Feller.
(w) Includes John G. Stumpf, Inc.
(x) Company markets in these states, but numbers are not available.
(y) Includes Autotronic Systems, Inc.
(z) Includes Omega Oil Co. (62).
(aa) Includes Boron Oil Company & BP Oil Inc.
(bb) Includes Etna Service Stations.
(cc) Includes Direct Oil Corp., Q-S Petroleum, Inc., Red Diamond Oil Company, & TLC Oil Company.
(dd) Includes Town Pump, & Gas-A-Matic.
(ee) Includes Beacon Oil Co.
(ff) Includes Sello, Reelo; Hi-Val, Big-Bi; & Lo-Lo.
(A) Estimated.
(B) Numbers not available.
Source: NPN questionnaires
†Includes District of Columbia

## Branded Retail Outlets (cont'd.)

| Company | TOTAL BRANDED RETAIL OUTLETS | TOTAL NUMBER OF STATES WHERE GASOLINE BRAND IS MARKETED† | West North Central |  |  |  |  |  |  |
|---|---|---|---|---|---|---|---|---|---|
|  |  |  | Minn. | Iowa | Mo. | N.D. | S.D. | Neb. | Kan. |
| Harrell Petroleum Co. | 27 | 1 | — | — | — | — | — | — | — |
| Harris Enterprises, Inc. | 41 | 2 | — | — | — | — | — | — | — |
| Heathwood Oil Co. | 1,000 | 2 | — | 500 | — | — | — | 500 | — |
| Highway Oil, Inc. (xxx) | 223 | 26 | — | 1 | 12 | 1 | 4 | 1 | 21 |
| Hi-Quality Lo-Cost Service Stn., Inc. | 18 | 1 | — | — | — | — | — | — | 18 |
| Barney Holland Oil Co. | 60 | 1 | — | — | — | — | — | — | — |
| Hornet Oil Co. (xxx) | 35 | 6 | — | — | — | — | — | — | 3 |
| Hudson Oil Co. (xxx) | 305 | 29 | 7 | 14 | 15 | — | — | 5 | 14 |
| Husky Oil Co. | 562 | 17 | — | 2 | — | 3 | 5 | 46 | 2 |
| JS & J Service, Inc. | 20 | 2 | — | — | — | — | — | — | — |
| Kent Oil Co. | 22 | 1 | — | — | — | — | — | — | — |
| Kerr-McKee Refining Corp. (xxx) | 1,431 | 17 | 65 | 98 | 84 | 8 | 29 | 53 | 128 |
| Krause General Oil Corp. (k) | 52 | 1 | — | 52 | — | — | — | — | — |
| The Kunz Oil Co. (xxx) | 33 | 1 | 33 | — | — | — | — | — | — |
| Kwik Shop, Inc. | 101 | 3 | — | 25 | — | — | — | 27 | 49 |
| Lerner Oil Co., Inc. (xxx) | 106 | 1 | — | — | — | — | — | — | — |
| Malco Products, Inc. | 73 | 3 | — | — | — | — | — | — | — |
| Martin Oil Service, Inc. (l) | 146 | 13 | 3 | 4 | — | — | — | 1 | — |
| Merritt Truax, Inc. | 56 | 1 | — | — | — | — | — | — | — |
| Mico Oil Co., Inc. | 28 | 14 | 3 | — | 2 | 1 | 2 | — | 2 |
| Midland Cooperatives, Inc. | 276 | 5 | 125 | 19 | — | 7 | — | — | — |
| Mid-Missouri Oil Co. | 14 | 1 | — | — | 14 | — | — | — | — |
| Midwest Petroleum Co. (xxx) | 66 | 1 | — | — | 66 | — | — | — | — |
| Milder Oil Co. | 15 | 1 | — | — | — | — | — | 15 | — |
| Miller & Holmes, Inc. (xxx) | 29 | 10 | 9 | 1 | — | 8 | 2 | 2 | — |
| Mobil Oil Corp. (ff) | 16,564 | 45 | 516 | 234 | 479 | 138 | 195 | 222 | 189 |
| Munford, Inc. | 463 | 13 | — | — | 1 | — | — | — | — |
| Murphy Oil Corp. | 767 | 14 | 59 | — | — | — | — | — | — |
| Musket Corp. (xxx) | 82 | 5 | — | — | — | — | — | — | 18 |
| National Convenience Stores, Inc. (n) | 131 | 39 | (x) | (x) | (x) | (x) | (x) | (x) | (x) |
| Neal, Inc. | 44 | 1 | — | — | — | — | — | — | — |
| Newell Oil Co. | 13 | 1 | — | — | — | — | — | — | — |
| Oasis Petroleum Corp. (xxx) | 104 | 20 | 3 | — | — | 1 | — | — | — |
| Pacer Oil Co. | 12 | 2 | — | — | — | — | — | — | — |
| Curtis Parker Oil Co. | 41 | 1 | — | — | — | — | — | — | — |
| Penna. Petroleum Products Co. (xxx) | 1,558 | 20 | 26 | — | — | — | — | — | — |
| Pester Corp. (p) | 221 | 10 | 13 | 99 | 23 | — | 6 | 15 | 20 |
| Petroleum Oil Co. (xxx) | 54 | 2 | — | — | — | — | — | — | — |
| Phillips Petroleum Co. (q) | 12,327 | 38 | 514 | 525 | 896 | 40 | 120 | 288 | 367 |
| Piasa Motor Fuels, Inc. | 22 | 2 | — | — | 2 | — | — | — | — |
| Powerine Oil Co. | 39 | 2 | — | — | — | — | — | — | — |
| Pride of Texas Distributing Co., Inc. | 29 | 1 | — | — | — | — | — | — | — |
| Quortrap Petroleum Co. | 12 | 1 | — | — | — | — | — | — | — |
| Racetrac Petroleum, Inc. | 125 | 12 | — | — | 1 | — | — | — | — |
| Remote Services, Inc. (xxx) | 301 | 13 | — | 1 | — | — | — | — | 3 |
| Research Fuels, Inc. (xxx) | 74 | 8 | — | — | — | — | — | — | — |
| River City Petroleum, Inc. | 18 | 1 | — | — | — | — | — | — | — |
| Sahara Oil Co., Inc. | 22 | 1 | — | — | — | — | — | — | — |
| Sav-Mor Oil Co. (xxx) | 100 | 14 | — | — | 1 | — | — | — | — |
| Schaeffer Oil (v) | 29 | 5 | 1 | — | — | 5 | 13 | 3 | — |
| Self Service Oil Co. | 19 | 4 | — | 2 | 5 | — | — | — | — |
| Shay Oil Co., Inc. (xxx) | 14 | 1 | — | — | — | — | — | — | — |
| Shell Oil Co. | 13,665 | 36 | 1 | 8 | 127 | — | — | — | — |
| Sigmor Corp. (y) | 577 | 20 | — | — | 1 | — | — | — | — |
| South Central Oil Co. |  |  |  |  |  |  |  |  |  |
| Southern Counties Oil Co. | 5 | 1 | — | — | — | — | — | — | — |
| Southern Union Refining Co. (xxx) | 21 | 1 | — | — | — | — | — | — | — |
| J.D. Streett & Co., Inc. | 356 | 5 | — | 15 | 168 | — | — | — | — |
| Star Service & Petroleum Co. | 186 | 17 | — | (x) | (x) | — | — | (x) | (x) |
| Suburban Propane Gas Corp. | 95 | 4 | — | — | — | — | — | — | — |
| Sun Co. | 8,361 | 33 | 1 | 378 | 255 | — | — | 7 | 10 |
| Sunmark Industries (xxx) | 9,433 | 37 | 56 | 441 | 284 | 1 | 25 | 48 | 68 |
| Sunny Service Stations, Inc. | 15 | 1 | — | — | — | — | — | — | — |
| Sunshine JR Stores, Inc. | 307 | 5 | — | — | — | — | — | — | — |
| Tenneco Oil Co. (cc) | 484 | 17 | — | — | — | — | — | — | — |
| Texaco Inc. | 22,490 | 50 | 14 | 22 | 161 | 13 | 45 | 63 | 33 |
| Texas Star Oil Corp. | 75 | 1 | — | — | — | — | — | — | — |
| Thornton Oil Corp. | 100 | 18 | — | — | — | — | — | — | — |
| Thriftyman Enterprises |  |  |  |  |  |  |  |  |  |
| Thunderbird Petroleums, Inc. (xxx) | 250 | 4 | — | — | — | 50 | — | — | — |
| Time Oil Co. | 211 | 5 | — | — | — | — | — | — | — |
| Tommy Oil Co., Inc. | 36 | 12 | — | — | 3 | — | — | — | 2 |
| Total Petroleum, Inc. | 1,893 | 22 | 56 | 127 | 372 | 7 | 20 | 76 | 321 |
| Truax Corp. (dd) | 92 | 2 | — | — | — | — | — | — | — |
| Union Oil Co. of Calif. | 12,529 | 44 | 258 | 65 | 17 | 9 | 9 | 3 | 1 |
| U-Pump-It of Kansas | 19 | 2 | — | — | — | — | — | — | 16 |
| Warelub Co., Inc. | 84 | 6 | — | 14 | 3 | — | — | — | — |
| Webster Oil Co. | 35 | 1 | — | — | 35 | — | — | — | — |
| Western Marketing, Inc. | 19 | 2 | — | — | — | — | — | — | 1 |
| Wickland Oil Co. | 86 | 3 | — | — | — | — | — | — | — |

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(o) Includes Barach-Fords Oils, & City Oil Co.

(p) Includes Pester Marketing Northern, & Pester Marketing Southern.

(q) Includes Aero Oil Co.

| West South Central | | | | Mountain | | | | | | | | Pacific | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ark. | La. | Okla. | Texas | Mont. | Idaho | Wyo. | Colo. | N.M. | Ariz. | Utah | Nev. | Wash. | Ore. | Calif. | Alaska | Hawaii |
| — | — | — | 27 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 3 | 38 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 1 | — | 12 | — | — | 4 | 3 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 60 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 7 | 2 | 16 | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 5 | — | — | — | 2 | — | 8 | — | 10 | — | 6 | 18 | 20 | 60 | — | — |
| — | — | — | 1 | 92 | 37 | 55 | 92 | 19 | 5 | 142 | 18 | 32 | 7 | 2 | — | — |
| — | — | — | — | — | — | — | — | — | 1 | — | — | — | — | 19 | — | — |
| — | — | — | 22 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 206 | — | 307 | 106 | — | — | — | — | 46 | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 106 | — | — |
| — | — | — | 14 | — | — | — | — | 46 | 13 | — | — | — | — | — | — | — |
| — | — | — | 1 | — | — | 3 | — | — | — | — | — | — | — | 2 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | 56 | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | 3 | — | — | — | — | — | — | — | — | — | — | — | — |
| 94 | 264 | 118 | 1,308 | — | — | — | — | 27 | 142 | 1 | 22 | 404 | 287 | 653 | — | — |
| 18 | 57 | — | 50 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 13 | 45 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | 55 | 1 | — | — | — | 7 | 1 | — | — | — | — | — | — | — | — |
| (x) | — | — | — | (x) | (x) | (x) | (x) | (x) | — | (x) | — | (x) | (x) | — | (x) | (x) |
| — | — | — | 44 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 13 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | 1 | — | — | — | — | — | — | 15 | — | — |
| 1 | — | 11 | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 41 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | 3 | 40 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | NA | NA | — | — | — |
| 301 | 226 | 591 | 1,583 | 88 | 92 | 63 | 308 | 201 | 40 | 128 | 22 | 2 | — | 1 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | 25 | — | 9 |
| — | — | — | 29 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 12 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 4 | 8 | — | 3 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 6 | — | 52 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 18 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | 22 | — | — | — | — | — | — | — |
| — | — | — | 8 | 4 | 10 | — | — | 1 | 6 | — | 2 | 3 | 1 | 60 | — | — |
| — | — | — | — | — | — | 7 | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | 14 | — | — | — | — | — | — | — |
| — | 115 | — | 222 | — | — | — | — | 7 | 54 | — | 27 | 127 | 112 | 1,613 | — | 78 |
| — | 26 | 1 | 418 | — | 4 | — | 11 | — | — | 1 | 2 | 12 | — | 39 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | 5 | — | — | — |
| — | — | — | — | — | — | — | — | 22 | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| (x) | (x) | (x) | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | 18 | 43 | 30 | 4 | — | — | — | — | — | — |
| 25 | — | 273 | — | — | — | — | — | — | — | — | — | 16 | — | — | — | — |
| 209 | — | 438 | — | — | — | — | — | — | — | — | — | 10 | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | 15 | — | — | — |
| — | 10 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | 46 | — | 39 | — | — | — | 14 | — | — | — | — | — | — | — | — | — |
| 517 | 938 | 506 | 3,394 | 1 | 72 | 102 | 294 | 292 | 205 | 129 | 73 | 458 | 348 | 1,749 | 76 | 51 |
| — | — | — | 75 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 7 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | 150 | 2 | — | — | — | — | — | 50 | — | — | — | — | — |
| — | — | — | — | — | 2 | — | — | — | — | — | 10 | 137 | 15 | 47 | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 21 | 6 | 179 | 25 | — | — | — | 49 | 11 | 23 | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | 3 | 89 | — | — | — |
| 105 | 21 | 2 | 91 | 4 | 61 | — | 1 | 2 | 161 | 10 | 65 | 383 | 308 | 2,074 | 103 | 141 |
| — | — | — | — | — | — | — | 3 | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | 18 | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | 5 | — | 1 | 80 | — | — |

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(r) Includes Sylvarin Oil, & White Flash Oil.
(s) Includes Q Oil Co. of Elizabeth City, Greenville, Hickory, Mt. Airy, Salisbury, Statewide, Southern Pines, Inc., & Gas House Company.
(t) Includes Corner Food Stores, Inc.
(u) Includes Masoil, Inc., Thrifty Petroleum, Camellia State Petroleum, & Maverick Oil, Inc.
(v) Includes Lil' Feller.
(w) Includes John G. Stumpf, Inc.
(x) Company markets in these states, but numbers are not available.
(y) Includes Autotronic Systems, Inc.
(z) Includes Omega Oil Co. (62).

(aa) Includes Boron Oil Company & BP Oil Inc.
(bb) Includes Etna Service Stations.
(cc) Includes Direct Oil Corp., Q-S Petroleum, Inc., Red Diamond Oil Company, & TLC Oil Company.
(dd) Includes Town Pump, & Gas-A-Matic.
(ee) Includes Beacon Oil Co.
(ff) Includes Sello, Reelo, Hi-Val, Big-Bi, & Lo-Lo.
(A) Estimated.
(B) Numbers not available.
Source: NPN questionnaires
†Includes District of Columbia

# Average Number of Employees in Oil

## (As of Jan. 1, 1981)

| | Mining | Manufacturing | | Transportation | | Wholesale | Retail | |
|---|---|---|---|---|---|---|---|---|
| | Crude Oil and Natural Gas Extraction | Petroleum Refining | Lubricating Oils and Greases | Pipelines (Except Natural Gas) | Gas Production and Distribution | Petroleum and Petroleum Products | Gasoline Service Stations | Total |
| **Alabama** | 1,716 | 380 | N.D. | 94 | 2,943 | 4,111 | 7,555 | 16,799 |
| **Alaska** | 5,870 | N.D. | 0 | N.D. | 230 | 350 | 925 | 7,375 |
| **Arizona** | 157 | 110 | 0 | N.D. | 959 | 1,414 | 7,145 | 9,785 |
| **Arkansas** | 3,247 | 746 | N.D. | 325 | 2,326 | 2,556 | 4,832 | 14,032 |
| **California** | 32,745 | 24,587 | 859 | 849 | 9,797 | 16,220 | 56,778 | 143,835 |
| Colorado | 18,064 | 538 | 29 | 154 | 2,206 | 3,133 | 9,083 | 33,207 |
| Connecticut | 240 | 0 | 90 | 20 | 1,310 | 2,420 | 8,580 | 12,660 |
| Delaware | 53 | 923 | 9 | 0 | 404 | 413 | 1,508 | 3,310 |
| Florida | 735 | 188 | 83 | 60 | 2,115 | 6,948 | 25,755 | 35,884 |
| Georgia | 76 | 107 | 118 | 482 | 3,557 | 6,303 | 14,176 | 24,819 |
| **Hawaii** | 0 | 450 | 0 | 0 | 357 | 454 | 3,391 | 4,652 |
| **Idaho** | 170 | 0 | 0 | 15 | 495 | 1,461 | 2,063 | 4,204 |
| **Illinois** | 6,500 | 11,000 | 800 | 1,100 | 9,000 | 10,800 | 30,000 | 69,200 |
| **Indiana** | 743 | 3,392 | 383 | 446 | 2,830 | 4,316 | 15,088 | 27,198 |
| **Iowa** | 13 | 0 | N.D. | 188 | 1,188 | 3,984 | 11,038 | 16,411 |
| Kansas | 13,716 | 4,022 | 444 | 2,043 | 4,869 | 2,847 | 7,121 | 35,062 |
| Kentucky | 2,905 | 3,494 | 3 | 171 | 2,803 | 3,013 | 9,660 | 22,049 |
| Louisiana | 85,779 | 12,288 | 447 | 1,143 | 6,401 | 6,236 | 9,173 | 121,467 |
| Maine | N.D. | 0 | 0 | N.D. | N.D. | 1,219 | 2,461 | 3,680 |
| Maryland | 66 | 0 | 232 | 0 | 1,439 | 3,450 | 12,754 | 17,941 |
| **Massachusetts** | 15 | 280 | 320 | N.D. | 4,790 | 3,770 | 14,060 | 23,235 |
| **Michigan** | 3,876 | 2,109 | 497 | 250 | 8,334 | 6,535 | 20,879 | 42,480 |
| **Minnesota** | N.D. | 979 | N.D. | 216 | 2,658 | 2,845 | 15,636 | 22,334 |
| **Mississippi** | 9,680 | 1,260 | 80 | 180 | 2,180 | 2,980 | 4,890 | 21,250 |
| **Missouri** | 150 | N.D. | 300 | 280 | 4,710 | 7,380 | 14,260 | 27,080 |
| Montana | 4,636 | 1,036 | 0 | 100 | 103 | 1,666 | 2,691 | 10,232 |
| Nebraska | 723 | 64 | 179 | 111 | 3,446 | 1,718 | 6,676 | 12,917 |
| Nevada | 811 | N.D. | N.D. | 22 | N.D. | 492 | 3,625 | 4,950 |
| New Hampshire | 17 | 0 | 0 | 3 | 312 | 656 | 2,436 | 3,424 |
| New Jersey | 98 | 8,995 | 1,027 | 140 | 1,913 | 4,687 | 18,026 | 34,886 |
| **New Mexico** | 13,441 | 1,023 | 8 | 231 | 3,555 | 1,705 | 4,408 | 24,371 |
| **New York** | 2,202 | 10,352 | 384 | 119 | 7,067 | 13,879 | 29,165 | 63,168 |
| **North Carolina** | 26 | 14 | 181 | 116 | 2,298 | 7,327 | 10,297 | 20,259 |
| **North Dakota** | 6,314 | 271 | 0 | 146 | 12 | 2,151 | 2,388 | 11,282 |
| **Ohio** | 9,823 | 9,547 | 670 | 713 | 7,989 | 6,380 | 26,918 | 62,040 |
| Oklahoma | 68,300 | 8,000 | 400 | 2,700 | 5,000 | 7,200 | 5,900 | 97,500 |
| Oregon | 136 | 0 | 10 | 0 | 1,503 | 2,302 | 8,187 | 12,138 |
| Pennsylvania | 4,117 | 13,054 | 1,509 | 722 | 8,819 | 10,994 | 27,651 | 66,866 |
| Rhode Island | 54 | 0 | 0 | 0 | 842 | 723 | 2,106 | 3,725 |
| South Carolina | 0 | 0 | 0 | 0 | 510 | 3,621 | 6,748 | 10,879 |
| **South Dakota** | 108 | 17 | 0 | 64 | 136 | 1,506 | 2,831 | 4,662 |
| **Tennessee** | 2,771 | 1,063 | 100 | 184 | 6,635 | 17,800 | 48,733 | 77,286 |
| **Texas** | 231,170 | 37,234 | 442 | 5,636 | 27,257 | 25,505 | 34,643 | 361,887 |
| **Utah** | 4,520 | 879 | 3 | 105 | 2,566 | 1,807 | 4,350 | 14,230 |
| **Vermont** | 0 | 0 | 14 | 0 | 141 | 418 | 1,490 | 2,063 |
| Virginia | 200 | 200 | 0 | 100 | 2,300 | 6,500 | 14,200 | 23,500 |
| Washington | 103 | 1,625 | N.D. | 89 | 1,571 | 2,993 | 9,397 | 15,778 |
| West Virginia | 4,500 | N.D. | N.D. | N.D. | 5,500 | 2,100 | 4,200 | 16,300 |
| Wisconsin | 17 | 150 | 112 | 157 | 2,865 | 4,547 | 14,324 | 22,172 |
| Wyoming | 18,077 | 1,712 | 2 | 412 | 870 | 1,003 | 2,980 | 25,056 |
| Dist. of Columbia | 0 | 0 | 0 | 0 | 41 | 210 | 1,034 | 1,285 |
| **Total** | **558,680** | **162,089** | **9,735** | **19,886** | **171,152** | **217,248** | **506,196,000** | **1,762,825** |

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N.D. = Non-Disclosure

Source: Independent Petroleum Assn. of America, "Oil Industry in Your State, 1981."

## Fuel Oil Demand by Type of Use

**Consumption of distillates** totalled 1,048-million bbl. in 1980, down a sharp 13.2% from revised figures for 1979. Resid consumption fell off too, dropping to 918-million bbl., a decrease of 11% from 1979's revised figures. (Note caveat at right).

## How Distillates Were Used in 1980

(Add 000 bbl.)

| Use | 1980 | 1979 | % Change | % Share of total distillate use in 1980 | % Share of total distillate use in 1979 |
|---|---|---|---|---|---|
| Heating | (a) | (a) | — | — | — |
| Residential | 224,902 | 274,639 | (18.1)% | 21.4% | — |
| Commercial | 88,471 | 98,557 | (10.2) | 8.4 | — |
| Industrial | 79,092 | 97,325 | (18.7) | 7.5 | — |
| Farm | 65,595 | 83,715 | (21.6) | 6.3 | — |
| Oil Company | 18,071 | 20,065 | ( 9.9) | 1.7 | — |
| Elec. Utils. | 31,812 | 46,579 | (31.7) | 3.0 | — |
| Railroads | 105,841 | 106,652 | ( 0.8) | 10.1 | — |
| Vessels | 28,166 | 38,826 | (27.5) | 1.9 | — |
| Military | 20,152 | 17,810 | 13.1 | 1.9 | — |
| Highway diesel | 323,431 | 327,402 | ( 1.2) | 30.8 | — |
| Off-highway diesel | 45,025 | 63,102 | (28.6) | 4.3 | — |
| All other | 18,417 | 33,784 | (45.5) | 1.2 | — |
| Total | 1,048,975 | 1,208,456 | (13.2)% | — | — |

(a) Separate heating category no longer available. The sum of residential, commercial, industrial and farm categories roughly equals the heating totals of prior years.
Source: Department of Energy, Fuel Oil Sales Annual, 1980.

## How Resid Was Used in 1980

(Add 000 bbl.)

| Use | 1980 | 1979 | % Change | % Share of total residual use in 1980 | % Share of total residual use in 1979 |
|---|---|---|---|---|---|
| Heating | (a) | (a) | — | — | — |
| Commercial | 90,005 | 81,216 | 10.8 % | 9.8% | 7.9% |
| Industrial | 154,568 | 197,914 | ( 21.9) | 16.8 | 19.2 |
| Oil Company | 56,409 | 51,308 | 9.9 | 6.1 | 5.0 |
| Elec. Utils. | 390,105 | 486,636 | ( 19.8) | 42.3 | 47.2 |
| Railroads | 631 | 251 | 151.4 | — | — |
| Vessels | 213,131 | 190,543 | 11.9 | 23.2 | 18.5 |
| Military | 9,124 | 6,718 | 35.8 | 1.0 | 0.6 |
| All other | 4,053 | 16,971 | ( 76.1) | 0.5 | 1.6 |
| Total | 918,026 | 1,031,557 | (11.0)% | — | — |

(a) Separate heating category no longer available. The sum of the commercial and industrial categories roughly equals the heating totals of prior years.
Source: Department of Energy, Fuel Oil Sales Annual, 1980.

## How New Homes Are Heated

**Fuel oil's position** in the new home market slipped badly in 1980, the most recent year for which data are available. Gas-heated homes increased significantly, mostly at the expense of oil-heated homes in the Northeast. Nationwide, oil dropped to 3% of the total.

| Region | New Homes Completed (Add 000) | Share of New Homes by Fuels and Percentages | | | |
|---|---|---|---|---|---|
| | | Gas | Electric | Oil | Other |
| Northeast | 100 | 35% | 36% | 17% | 11% |
| North Central | 170 | 60 | 27 | 4 | 10 |
| South | 465 | 30 | 67 | 1 | 2 |
| West | 233 | 52 | 42 | — | 6 |
| Total 1980 | 967 | 41% | 50% | 3% | 5% |
| Total 1979 | 1,301 | 39% | 51% | 7% | 3% |

## CAVEAT CAVEAT CAVEAT

**Department of Energy** revised its questionnaires, format, and sampling techniques in handling the 1979 and 1980 Fuel Oil Sales Reports. Thus data on this and other fuel-oil pages are not comparable with those in the past. For example, DOE dropped the traditional "heating" categories and split the information between "commercial" and "residential" columns. It also added a new column, "farm," in the 1979 report, thus further splintering some of the old data bases. Future issues of the Factbook will parallel the new DOE format but extra precaution should be taken in trying to balance and/or compare the data from 1979 and 1980 against that of the earlier years.

## Gas: Who Uses It for Heat

**Gas added more than** 1-million space-heating customers in 1980, up 14% over the preceding year. Almost 60% of the additions were conversions from other fuels, notably No. 2 heating oil. Gas installations in new homes dipped again in 1980 for the second year in a row.

| | % of Gas-heated homes to total gas-using homes | Consumers Added in 1980 (Add 000) | | |
|---|---|---|---|---|
| | | New homes | Existing homes | Total added |
| New England | 63.1% | 9.4 | 63.5 | 72.9 |
| Mid-Atlantic | 80.0 | 26.0 | 212.2 | 238.2 |
| East North Central | 92.1 | 76.3 | 164.9 | 241.2 |
| West North Central | 96.2 | 34.9 | 28.4 | 63.3 |
| South Atlantic | 89.4 | 56.7 | 82.9 | 139.6 |
| East South Central | 96.5 | 18.1 | 4.4 | 22.5 |
| West South Central | 99.5 | 71.4 | 4.2 | 75.6 |
| Mountain | 98.2 | 68.7 | 2.6 | 71.3 |
| Pacific | 95.8 | 145.7 | 19.9 | 165.6 |
| Total | 87.8% | 507.2 | 583.0 | 1,090.2 |
| % Change '80 vs '79 | — | −14.3% | 59.6% | 13.9% |

Source: American Gas Assn., Home Heating Survey, 1980.

## Gas Heat Equipment Shipments

**Shipments of central heating furnaces** and boilers for gas-fired installations dropped again in 1981, according to Gas Appliance Manufacturers Assn. Furnaces sagged 1.8% while boilers plummeted another 44.8%. Shipments of floor furnaces declined for the third year in a row while vented wall and direct furnaces rose for the first time in several years.

| Class and Type of Equipment | 1981 | 1980 | % Change |
|---|---|---|---|
| Central Heating: | | | |
| Furnaces | 1,420,400 | 1,445,700 | −1.8% |
| Boilers | 161,900 | 293,300 | −44.8 |
| Space Heating: | | | |
| Wall Furnaces Vented | 127,160 | 124,930 | 1.8 |
| Direct Furnaces | 80,140 | 74,460 | 7.6 |
| Floor Furnaces | 10,552 | 12,240 | −13.8 |

Source: Gas Appliance Manufacturers Assn.

# Distillate Sales in 1980 . . .

(Add 000 bbl.)

| Destination | Residential | | Commercial | | Industrial | | Oil Company | |
|---|---|---|---|---|---|---|---|---|
| | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) |
| **PAD District 1** | | | | | | | | |
| **New England States** | | | | | | | | |
| **Connecticut** | 13,406 | 17,606 | 2,892 | 5,720 | 2,554 | 1,603 | 82 | 69 |
| **Maine** | 6,343 | 7,166 | 1,832 | 1,510 | 374 | 281 | 22 | 5 |
| **Massachusetts** | 22,607 | 25,848 | 7,475 | 9,015 | 1,351 | 1,443 | 51 | 28 |
| **New Hampshire** | 3,503 | 4,244 | 1,039 | 441 | 369 | 200 | 13 | 9 |
| **Rhode Island** | 3,282 | 4,876 | 614 | 1,223 | 281 | 291 | 9 | 11 |
| **Vermont** | 2,161 | 3,170 | 617 | 648 | 160 | 172 | 12 | 10 |
| **Central Atlantic States** | | | | | | | | |
| **Delaware** | 1,310 | 1,453 | 631 | 560 | 281 | 323 | 4 | 1 |
| **District of Columbia** | 746 | 831 | 644 | 670 | 37 | 27 | 2 | 9 |
| **Maryland** | 8,756 | 9,184 | 2,852 | 3,576 | 1,706 | 2,095 | 189 | 122 |
| **New Jersey** | 23,866 | 21,139 | 9,125 | 7,138 | 5,645 | 4,872 | 175 | 122 |
| **New York** | 37,516 | 43,738 | 14,425 | 14,822 | 6,360 | 9,713 | 316 | 182 |
| **Pennsylvania** | 27,710 | 31,868 | 5,831 | 5,540 | 6,108 | 6,707 | 716 | 1,707 |
| **Lower Atlantic States** | | | | | | | | |
| **Florida** | 1,209 | 1,052 | 1,917 | 2,135 | 2,107 | 1,486 | 373 | 172 |
| **Georgia** | 575 | 299 | 314 | 853 | 1,626 | 1,773 | 79 | 62 |
| **North Carolina** | 7,012 | 9,282 | 1,665 | 1,823 | 1,952 | 2,467 | 77 | 97 |
| **South Carolina** | 1,573 | 1,947 | 479 | 579 | 663 | 880 | 53 | 74 |
| **Virginia** | 7,346 | 12,847 | 1,626 | 2,735 | 1,933 | 2,464 | 106 | 65 |
| **West Virginia** | 1,164 | 1,280 | 261 | 469 | 1,761 | 2,347 | 269 | 179 |
| **PAD 1 Total** | **170,085** | **197,832** | **54,239** | **59,457** | **35,268** | **39,144** | **2,568** | **2,924** |
| **PAD District 2** | | | | | | | | |
| Illinois | 3,496 | 8,226 | 2,090 | 2,594 | 2,010 | 2,327 | 581 | 671 |
| Indiana | 5,373 | 7,613 | 1,976 | 2,647 | 1,913 | 2,739 | 199 | 162 |
| Iowa | 2,377 | 3,274 | 748 | 1,312 | 733 | 1,336 | 38 | 34 |
| Kansas | 149 | 373 | 358 | 807 | 263 | 416 | 518 | 537 |
| Kentucky | 816 | 817 | 2,620 | 1,693 | 2,166 | 2,708 | 319 | 123 |
| Michigan | 9,153 | 11,341 | 3,109 | 2,096 | 1,407 | 1,436 | 119 | 132 |
| Minnesota | 5,919 | 7,049 | 1,436 | 1,723 | 1,264 | 2,453 | 73 | 61 |
| Missouri | 1,240 | 1,742 | 996 | 1,441 | 586 | 1,820 | 91 | 92 |
| Nebraska | 358 | 448 | 180 | 450 | 120 | 431 | 33 | 15 |
| North Dakota | 1,168 | 1,570 | 639 | 356 | 211 | 259 | 208 | 116 |
| Ohio | 7,396 | 7,621 | 2,579 | 1,513 | 6,005 | 4,366 | 374 | 286 |
| Oklahoma | 15 | 6 | 314 | 206 | 292 | 291 | 887 | 391 |
| South Dakota | 758 | 931 | 363 | 370 | 78 | 84 | 19 | 20 |
| Tennessee | 307 | 369 | 1,010 | 919 | 2,045 | 3,275 | 230 | 339 |
| Wisconsin | 8,117 | 12,066 | 1,674 | 1,956 | 953 | 1,747 | 35 | 53 |
| **PAD 2 Total** | **46,642** | **63,446** | **20,092** | **20,083** | **20,046** | **25,688** | **3,724** | **3,032** |
| **PAD District 3** | | | | | | | | |
| **Alabama** | 13 | 88 | 638 | 649 | 1,389 | 2,899 | 133 | 21 |
| **Arkansas** | 151 | 409 | 111 | 233 | 283 | 589 | 135 | 533 |
| **Louisiana** | 5 | 41 | 397 | 5,741 | 2,498 | 3,902 | 2,989 | 3,547 |
| **Mississippi** | 7 | 144 | 24 | 175 | 621 | 769 | 255 | 268 |
| **New Mexico** | 11 | 5 | 132 | 187 | 605 | 777 | 113 | 60 |
| **Texas** | 8 | 712 | 2,829 | 4,395 | 4,395 | 8,795 | 5,338 | 4,708 |
| **PAD 3 Total** | **195** | **1,399** | **4,131** | **11,380** | **9,791** | **17,731** | **8,963** | **9,137** |
| **PAD District 4** | | | | | | | | |
| Colorado | 78 | 328 | 337 | 273 | 1,143 | 692 | 81 | 67 |
| Idaho | 483 | 881 | 217 | 309 | 575 | 1,090 | 25 | 17 |
| Montana | 419 | 664 | 344 | 754 | 273 | 451 | 175 | 257 |
| Utah | 111 | 230 | 1,023 | 837 | 814 | 1,106 | 124 | 103 |
| Wyoming | 23 | 38 | 426 | 92 | 2,306 | 1,981 | 1,324 | 693 |
| **PAD 4 Total** | **1,114** | **2,141** | **2,347** | **2,265** | **5,111** | **5,320** | **1,729** | **1,137** |
| **PAD District 5** | | | | | | | | |
| **Alaska** | 1,167 | 927 | 574 | 287 | 682 | 609 | 2 | 3 |
| **Arizona** | 2 | 200 | 279 | 448 | 1,600 | 1,434 | 17 | 36 |
| **California** | 94 | 1,060 | 3,210 | 1,392 | 3,581 | 4,213 | 433 | 2,365 |
| **Hawaii** | 1 | 2 | 396 | 259 | 106 | 170 | 196 | 581 |
| **Nevada** | 186 | 208 | 351 | 102 | 294 | 218 | 2 | 2 |
| **Oregon** | 2,010 | 2,659 | 1,784 | 1,378 | 1,215 | 1,563 | 192 | 283 |
| **Washington** | 3,406 | 4,765 | 1,068 | 1,506 | 1,398 | 1,235 | 245 | 565 |
| **PAD 5 Total** | **6,866** | **9,821** | **7,662** | **5,372** | **8,876** | **9,442** | **1,087** | **3,835** |
| **U.S. Total** | **224,902** | **274,639** | **88,471** | **98,557** | **79,092** | **97,325** | **18,071** | **20,065** |

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(a) Preliminary; (b) Final

# . . . By Categories and Uses

| Destination | Electric Utility |  | Farm |  | Military |  | Railroad |  | Vessel Bunkering |  |
|---|---|---|---|---|---|---|---|---|---|---|
|  | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) |
| **PAD District 1** |  |  |  |  |  |  |  |  |  |  |
| New England States |  |  |  |  |  |  |  |  |  |  |
| Connecticut | 108 | 92 | 84 | 101 | 1 | 2 | 93 | 176 | 28 | 59 |
| Maine | 64 | 72 | 112 | 131 | 22 | 34 | 185 | 236 | 30 | 142 |
| Massachusetts | 412 | 335 | 130 | 120 | 99 | 306 | 278 | 276 | 154 | 186 |
| New Hampshire | 15 | 20 | 62 | 87 | 11 | 17 | 7 | 5 | 10 | 3 |
| Rhode Island | 30 | 0 | 18 | 19 | 1 | 3 | 0 | 0 | 33 | 66 |
| Vermont | 17 | 38 | 114 | 86 | 1 | 16 | 47 | 137 | 7 | 6 |
| Central Atlantic States |  |  |  |  |  |  |  |  |  |  |
| Delaware | 193 | 279 | 113 | 122 | 42 | 16 | 40 | 29 | 52 | 59 |
| District of Columbia | 1,288 | 1,748 | 0 | 38 | 84 | 272 | 93 | 154 | 1 | 2 |
| Maryland | 1,671 | 1,154 | 515 | 416 | 481 | 781 | 833 | 1,012 | 616 | 853 |
| New Jersey | 1,956 | 1,941 | 204 | 174 | 67 | 68 | 277 | 1,840 | 1,786 | 1,963 |
| New York | 760 | 1,077 | 1,190 | 1,293 | 39 | 221 | 1,389 | 2,024 | 1,020 | 1,493 |
| Pennsylvania | 2,279 | 2,971 | 1,307 | 1,241 | 163 | 238 | 4,352 | 4,784 | 370 | 821 |
| Lower Atlantic States |  |  |  |  |  |  |  |  |  |  |
| Florida | 2,533 | 4,134 | 1,072 | 963 | 59 | 1,343 | 1,944 | 1,262 | 2,233 | 2,896 |
| Georgia | 774 | 675 | 1,078 | 828 | 229 | 510 | 2,870 | 1,314 | 417 | 594 |
| North Carolina | 496 | 438 | 1,429 | 1,434 | 65 | 68 | 1,482 | 2,852 | 124 | 719 |
| South Carolina | 667 | 553 | 743 | 673 | 127 | 221 | 463 | 736 | 166 | 310 |
| Virginia | 887 | 1,543 | 502 | 444 | 259 | 1,172 | 2,685 | 3,404 | 757 | 1,058 |
| West Virginia | 702 | 786 | 90 | 25 | 20 | 34 | 1,759 | 2,023 | 141 | 267 |
| **PAD 1 Total** | **14,852** | **17,856** | **8,757** | **8,195** | **1,770** | **5,322** | **18,797** | **22,264** | **7,945** | **11,497** |
| **PAD District 2** |  |  |  |  |  |  |  |  |  |  |
| Illinois | 970 | 3,800 | 3,131 | 3,585 | 627 | 114 | 7,273 | 8,706 | 248 | 248 |
| Indiana | 835 | 1,388 | 2,090 | 3,912 | 11 | 18 | 3,908 | 4,249 | 78 | 71 |
| Iowa | 39 | 1,098 | 3,344 | 4,529 | 32 | 38 | 1,519 | 1,659 | 25 | 20 |
| Kansas | 43 | 607 | 2,141 | 3,704 | 14 | 95 | 4,885 | 4,871 | 1 | 0 |
| Kentucky | 237 | 204 | 390 | 483 | 45 | 153 | 3,691 | 2,798 | 3,110 | 4,204 |
| Michigan | 1,049 | 1,377 | 2,319 | 2,415 | 432 | 172 | 2,062 | 2,156 | 62 | 99 |
| Minnesota | 608 | 584 | 3,531 | 3,960 | 43 | 38 | 1,845 | 2,154 | 256 | 299 |
| Missouri | 471 | 1,060 | 3,080 | 3,963 | 25 | 37 | 1,737 | 1,866 | 582 | 488 |
| Nebraska | 189 | 404 | 2,961 | 4,787 | 22 | 38 | 1,629 | 2,591 | 11 | 8 |
| North Dakota | 84 | 388 | 1,787 | 2,104 | 627 | 554 | 1,302 | 829 | 0 | 0 |
| Ohio | 1,858 | 2,958 | 2,193 | 1,657 | 130 | 5 | 7,598 | 2,221 | 133 | 364 |
| Oklahoma | 18 | 124 | 1,067 | 967 | 87 | 1 | 760 | 622 | 2 | 25 |
| South Dakota | 103 | 141 | 1,394 | 2,103 | 43 | 76 | 217 | 311 | 0 | 0 |
| Tennessee | 397 | 763 | 758 | 851 | 33 | 651 | 3,039 | 3,110 | 983 | 2,588 |
| Wisconsin | 552 | 1,454 | 1,920 | 4,959 | 12 | 18 | 1,194 | 1,451 | 172 | 176 |
| **PAD 2 Total** | **7,453** | **16,350** | **32,106** | **43,979** | **2,183** | **2,008** | **42,659** | **39,594** | **5,663** | **8,590** |
| **PAD District 3** |  |  |  |  |  |  |  |  |  |  |
| Alabama | 128 | 137 | 790 | 532 | 102 | 1,042 | 2,955 | 550 | 371 | 895 |
| Arkansas | 335 | 408 | 1,609 | 2,925 | 40 | 24 | 1,630 | 1,651 | 56 | 530 |
| Louisiana | 2,116 | 1,620 | 1,390 | 1,356 | 82 | 51 | 2,139 | 2,752 | 3,423 | 4,410 |
| Mississippi | 299 | 254 | 1,429 | 1,166 | 40 | 101 | 917 | 689 | 211 | 557 |
| New Mexico | 276 | 636 | 173 | 330 | 20 | 3 | 1,427 | 1,788 | 0 | 0 |
| Texas | 2,050 | 568 | 5,401 | 8,918 | 6,390 | 1,119 | 7,744 | 11,007 | 5,760 | 6,824 |
| **PAD 3 Total** | **5,204** | **3,623** | **10,792** | **15,227** | **6,674** | **2,340** | **16,812** | **18,437** | **9,821** | **13,216** |
| **PAD District 4** |  |  |  |  |  |  |  |  |  |  |
| Colorado | 164 | 838 | 1,442 | 1,495 | 111 | 159 | 3,055 | 3,733 | 0 | 0 |
| Idaho | 0 | 5 | 1,035 | 1,420 | 194 | 211 | 1,250 | 1,293 | 0 | 0 |
| Montana | 94 | 163 | 877 | 1,208 | 27 | 26 | 2,395 | 2,153 | 0 | 0 |
| Utah | 77 | 118 | 201 | 256 | 13 | 131 | 2,329 | 2,584 | 0 | 0 |
| Wyoming | 145 | 156 | 357 | 926 | 16 | 2 | 4,167 | 3,446 | 0 | 0 |
| **PAD 4 Total** | **480** | **1,280** | **3,912** | **5,305** | **361** | **529** | **13,196** | **13,209** | **0** | **0** |
| **PAD District 5** |  |  |  |  |  |  |  |  |  |  |
| Alaska | 502 | 967 | 17 | 19 | 338 | 274 | 79 | 87 | 1,097 | 1,075 |
| Arizona | 1,003 | 1,805 | 961 | 971 | 15 | 33 | 1,298 | 1,314 | 0 | 0 |
| California | 897 | 2,667 | 6,716 | 7,394 | 4,970 | 3,628 | 7,288 | 6,399 | 2,267 | 2,147 |
| Hawaii | 886 | 278 | 373 | 319 | 2,840 | 3,385 | 22 | 2 | 26 | 38 |
| Nevada | 83 | 35 | 108 | 108 | 10 | 2 | 898 | 438 | 0 | 0 |
| Oregon | 366 | 1,630 | 777 | 761 | 57 | 96 | 2,895 | 2,980 | 144 | 421 |
| Washington | 86 | 88 | 1,056 | 1,437 | 934 | 193 | 1,897 | 1,928 | 1,203 | 1,842 |
| **PAD 5 Total** | **3,823** | **7,470** | **10,028** | **11,009** | **9,164** | **7,611** | **14,377** | **13,148** | **4,737** | **5,523** |
| **U.S. Total** | **31,612** | **46,579** | **65,595** | **83,715** | **20,152** | **17,810** | **105,841** | **106,652** | **28,166** | **38,826** |

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(a)Preliminary: (b)Final. (table continued on next page).

# Distillate Sales in 1980 (Continued)

(Add 000 bbl.)

| | On-Highway | | Off-Highway | | Other | | Total | |
|---|---|---|---|---|---|---|---|---|
| **Destination** | **1980(a)** | **1979(b)** | **1980(a)** | **1979(b)** | **1980(a)** | **1979(b)** | **1980(a)** | **1979(b)** |
| **PAD District 1** | | | | | | | | |
| New England States | | | | | | | | |
| Connecticut | 2,446 | 2,426 | 422 | 206 | 78 | 76 | 22,194 | 28,138 |
| Maine | 1,349 | 1,384 | 183 | 203 | 67 | 123 | 10,583 | 11,287 |
| Massachusetts | 4,346 | 4,291 | 250 | 470 | 95 | 336 | 37,248 | 42,654 |
| New Hampshire | 656 | 645 | 99 | 87 | 12 | 20 | 5,796 | 5,778 |
| Rhode Island | 638 | 544 | 37 | 43 | 68 | 23 | 5,011 | 7,099 |
| Vermont | 699 | 736 | 191 | 338 | 22 | 51 | 4,048 | 5,408 |
| Central Atlantic States | | | | | | | | |
| Delaware | 825 | 654 | 167 | 79 | 48 | 149 | 3,706 | 3,724 |
| District of Columbia | 406 | 428 | 13 | 28 | 139 | 178 | 3,453 | 4,385 |
| Maryland | 3,891 | 3,524 | 658 | 735 | 214 | 510 | 22,382 | 23,962 |
| New Jersey | 8,066 | 7,062 | 665 | 802 | 616 | 3,407 | 52,448 | 50,528 |
| New York | 7,814 | 8,074 | 1,054 | 1,249 | 376 | 4,988 | 72,259 | 88,874 |
| Pennsylvania | 16,555 | 15,311 | 2,564 | 3,939 | 382 | 1,399 | 68,337 | 76,526 |
| Lower Atlantic States | | | | | | | | |
| Florida | 11,704 | 10,085 | 1,082 | 586 | 2,410 | 1,764 | 28,643 | 27,877 |
| Georgia | 10,554 | 10,611 | 386 | 218 | 806 | 774 | 19,708 | 18,511 |
| North Carolina | 8,987 | 9,240 | 494 | 552 | 166 | 265 | 23,943 | 29,237 |
| South Carolina | 5,372 | 5,485 | 265 | 282 | 142 | 124 | 10,713 | 11,864 |
| Virginia | 7,466 | 6,404 | 843 | 939 | 173 | 276 | 24,583 | 33,351 |
| West Virginia | 2,904 | 1,836 | 1,069 | 1,138 | 359 | 336 | 10,519 | 10,721 |
| **PAD 1 Total** | **94,678** | **88,740** | **10,442** | **11,894** | **6,173** | **14,799** | **425,574** | **479,924** |
| **PAD District 2** | | | | | | | | |
| Illinois | 14,308 | 16,828 | 1,281 | 1,699 | 803 | 551 | 36,818 | 49,349 |
| Indiana | 13,551 | 12,953 | 617 | 457 | 211 | 197 | 30,762 | 36,406 |
| Iowa | 6,312 | 6,957 | 312 | 565 | 249 | 165 | 15,728 | 20,987 |
| Kansas | 5,449 | 5,511 | 502 | 1,892 | 36 | 468 | 14,359 | 19,281 |
| Kentucky | 5,890 | 5,553 | 3,320 | 2,015 | 208 | 390 | 22,812 | 21,141 |
| Michigan | 7,140 | 8,816 | 652 | 1,294 | 285 | 308 | 27,789 | 31,642 |
| Minnesota | 5,936 | 7,212 | 727 | 813 | 87 | 371 | 21,725 | 26,717 |
| Missouri | 8,430 | 8,916 | 923 | 1,149 | 80 | 629 | 18,241 | 23,203 |
| Nebraska | 3,426 | 3,434 | 272 | 217 | 9 | 34 | 9,210 | 12,857 |
| North Dakota | 1,849 | 1,939 | 153 | 229 | 90 | 90 | 8,118 | 8,434 |
| Ohio | 16,604 | 16,935 | 2,593 | 6,522 | 1,368 | 1,478 | 48,831 | 45,926 |
| Oklahoma | 7,144 | 7,369 | 1,133 | 4,126 | 309 | 262 | 12,028 | 14,390 |
| South Dakota | 1,708 | 1,882 | 129 | 384 | 12 | 30 | 4,824 | 6,332 |
| Tennessee | 9,080 | 9,631 | 601 | 1,243 | 598 | 146 | 19,081 | 23,885 |
| Wisconsin | 7,153 | 7,618 | 569 | 610 | 95 | 201 | 22,446 | 32,309 |
| **PAD 2 Total** | **113,980** | **121,554** | **13,784** | **23,215** | **4,440** | **5,320** | **312,772** | **372,859** |
| **PAD District 3** | | | | | | | | |
| Alabama | 7,570 | 6,731 | 676 | 731 | 353 | 568 | 15,118 | 14,843 |
| Arkansas | 4,942 | 5,096 | 1,411 | 1,894 | 90 | 355 | 10,793 | 14,647 |
| Louisiana | 6,756 | 6,819 | 1,163 | 1,768 | 464 | 574 | 23,422 | 32,581 |
| Mississippi | 4,824 | 4,443 | 789 | 1,898 | 417 | 598 | 9,833 | 11,062 |
| New Mexico | 3,939 | 3,757 | 1,149 | 2,203 | 146 | 148 | 7,991 | 9,894 |
| Texas | 28,170 | 29,622 | 4,394 | 6,947 | 629 | 4,222 | 73,108 | 87,837 |
| **PAD 3 Total** | **56,201** | **56,468** | **9,582** | **15,441** | **2,099** | **6,465** | **140,265** | **170,864** |
| **PAD District 4** | | | | | | | | |
| Colorado | 3,358 | 3,603 | 962 | 730 | 337 | 326 | 11,068 | 12,244 |
| Idaho | 1,293 | 1,932 | 474 | 363 | 90 | 116 | 5,636 | 7,637 |
| Montana | 2,315 | 2,535 | 441 | 517 | 150 | 309 | 7,510 | 9,037 |
| Utah | 2,609 | 2,623 | 707 | 1,045 | 364 | 526 | 8,372 | 9,559 |
| Wyoming | 2,206 | 2,202 | 1,921 | 2,153 | 318 | 313 | 13,209 | 12,002 |
| **FAD 4 Total** | **11,781** | **12,895** | **4,505** | **4,808** | **1,259** | **1,590** | **45,795** | **50,479** |
| **PAD District 5** | | | | | | | | |
| Alaska | 1,079 | 284 | 187 | 435 | 888 | 809 | 6,612 | 5,776 |
| Arizona | 5,137 | 5,328 | 737 | 675 | 219 | 750 | 11,288 | 12,994 |
| California | 27,083 | 28,574 | 2,702 | 3,905 | 2,072 | 2,640 | 61,313 | 66,384 |
| Hawaii | 426 | 399 | 237 | 182 | 451 | 342 | 5,962 | 5,957 |
| Nevada | 1,833 | 1,590 | 194 | 324 | 50 | 52 | 4,009 | 3,079 |
| Oregon | 5,714 | 5,618 | 1,496 | 943 | 294 | 372 | 16,944 | 18,704 |
| Washington | 5,517 | 5,952 | 1,159 | 1,280 | 472 | 645 | 18,441 | 21,436 |
| **PAD 5 Total** | **46,791** | **47,745** | **6,712** | **7,744** | **4,446** | **5,610** | **124,569** | **134,330** |
| **U.S. Total** | **323,431** | **327,402** | **45,025** | **63,102** | **18,417** | **33,784** | **1,048,975** | **1,208,456** |

(a) Preliminary; (b) Final.

**Caveat:** This is a new format developed by Department of Energy in 1979. Thus this data is not comparable with pre-1980 issues of the NPN Factbook.

Source: Deliveries of Fuel Oil and Kerosine in 1980, Department of Energy, February, 1982.

# Residual Fuel Oil Sales in 1980 . . .

(Add 000 bbl.)

| | Commercial | | Industrial | | Oil Company | | Electric Utility | | Military | |
|---|---|---|---|---|---|---|---|---|---|---|
| Destination | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) |
| **PAD District 1** | | | | | | | | | | |
| **New England States** | | | | | | | | | | |
| **Connecticut** | 1,173 | 576 | 6,640 | 7,870 | 56 | 86 | 20,292 | 18,511 | 0 | 0 |
| **Maine** | 683 | 401 | 4,046 | 7,007 | 4 | 5 | 3,469 | 2,515 | 4 | 62 |
| **Massachusetts** | 4,864 | 3,819 | 2,310 | 6,566 | 105 | 38 | 44,519 | 46,660 | 11 | 602 |
| **New Hampshire** | 373 | 15 | 925 | 602 | 0 | 1 | 4,089 | 4,618 | 0 | 871 |
| **Rhode Island** | 180 | 271 | 629 | 856 | 1 | 2 | 1,337 | 1,096 | 0 | 39 |
| **Vermont** | 237 | 160 | 235 | 179 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Central Atlantic States** | | | | | | | | | | |
| **Delaware** | 4,274 | 1,696 | 1,705 | 2,098 | 0 | 0 | 5,995 | 6,732 | 0 | 0 |
| **District of Columbia** | 37 | 82 | 28 | 53 | 0 | 0 | 286 | 582 | 59 | 0 |
| **Maryland** | 1,161 | 1,107 | 2,352 | 4,372 | 222 | 23 | 7,722 | 13,809 | 123 | 15 |
| **New Jersey** | 10,972 | 10,588 | 10,763 | 14,666 | 6,243 | 7,397 | 12,400 | 18,336 | 52 | 0 |
| **New York** | 25,482 | 22,583 | 14,051 | 17,264 | 626 | 1,023 | 61,199 | 69,748 | 0 | 1,125 |
| **Pennsylvania** | 1,524 | 3,200 | 7,540 | 13,151 | 3,881 | 5,301 | 16,854 | 18,402 | 207 | 70 |
| **Lower Atlantic States** | | | | | | | | | | |
| **Florida** | 1,479 | 2,595 | 13,430 | 12,092 | 35 | 72 | 70,135 | 72,213 | 199 | 262 |
| **Georgia** | 10 | 97 | 5,298 | 7,529 | 32 | 14 | 128 | 2,139 | 28 | 8 |
| **North Carolina** | 492 | 375 | 8,468 | 11,257 | 15 | 17 | 39 | 0 | 45 | 31 |
| **South Carolina** | 35 | 381 | 4,187 | 6,304 | 67 | 20 | 1,991 | 3,697 | 30 | 46 |
| **Virginia** | 444 | 208 | 4,986 | 6,280 | 134 | 120 | 14,605 | 22,888 | 138 | 301 |
| **West Virginia** | 5 | 9 | 1,091 | 1,603 | 370 | 369 | 0 | 0 | 0 | 0 |
| **PAD 1 Total** | **53,425** | **48,163** | **88,684** | **119,749** | **11,791** | **14,488** | **265,060** | **301,946** | **896** | **3,432** |
| **PAD District 2** | | | | | | | | | | |
| Illinois | 2,638 | 4,190 | 7,594 | 6,960 | 4,886 | 3,800 | 12,853 | 11,391 | 271 | 283 |
| Indiana | 2,436 | 2,231 | 6,758 | 9,769 | 5,226 | 5,008 | 0 | 0 | 73 | 30 |
| Iowa | 79 | 239 | 274 | 572 | 0 | 0 | 14 | 0 | 0 | 0 |
| Kansas | 0 | 51 | 365 | 994 | 641 | 1,598 | 55 | 2,326 | 0 | 0 |
| Kentucky | 19 | 12 | 579 | 756 | 280 | 410 | 0 | 0 | 136 | 52 |
| Michigan | 225 | 487 | 2,726 | 3,095 | 456 | 198 | 8,335 | 14,798 | 24 | 30 |
| Minnesota | 32 | 117 | 1,569 | 874 | 226 | 276 | 268 | 921 | 47 | 60 |
| Missouri | 555 | 1,234 | 319 | 946 | 385 | 583 | 25 | 431 | 142 | 142 |
| Nebraska | 23 | 109 | 29 | 40 | 0 | 0 | 26 | 470 | 0 | 0 |
| North Dakota | 401 | 435 | 112 | 167 | 162 | 204 | 0 | 0 | 0 | 44 |
| Ohio | 381 | 1,353 | 3,979 | 4,570 | 1,499 | 1,167 | 79 | 1,503 | 0 | 0 |
| Oklahoma | 30 | 230 | 256 | 255 | 447 | 353 | 0 | 39 | 0 | 0 |
| South Dakota | 19 | 46 | 84 | 87 | 0 | 0 | 4 | 37 | 0 | 0 |
| Tennessee | 48 | 3 | 1,353 | 2,159 | 23 | 96 | 0 | 0 | 0 | 97 |
| Wisconsin | 30 | 213 | 1,269 | 1,214 | 141 | 136 | 76 | 68 | 14 | 8 |
| **PAD 2 Total** | **6,916** | **10,950** | **27,266** | **32,458** | **14,372** | **13,829** | **21,735** | **31,984** | **707** | **746** |
| **PAD District 3** | | | | | | | | | | |
| **Alabama** | 3 | 1 | 3,720 | 4,819 | 54 | 1,951 | 0 | 0 | 586 | 0 |
| **Arkansas** | 438 | 953 | 1,441 | 2,869 | 0 | 64 | 2,789 | 7,375 | 0 | 0 |
| **Louisiana** | 13,493 | 8,867 | 7,512 | 8,402 | 4,597 | 6,703 | 5,139 | 13,377 | 3,091 | 36 |
| **Mississippi** | 3,412 | 5,753 | 1,899 | 3,364 | 261 | 250 | 4,124 | 11,311 | 0 | 27 |
| **New Mexico** | 0 | 0 | 649 | 202 | 206 | 17 | 79 | 313 | 0 | 0 |
| **Texas** | 2,574 | 1,069 | 8,663 | 13,514 | 6,778 | 3,658 | 853 | 2,149 | 937 | 136 |
| **PAD 3 Total** | **19,920** | **16,643** | **23,884** | **33,170** | **11,896** | **12,643** | **12,984** | **34,525** | **4,614** | **199** |
| **PAD District 4** | | | | | | | | | | |
| Colorado | 3 | 13 | 174 | 330 | 1,442 | 122 | 141 | 655 | 0 | 0 |
| Idaho | 488 | 0 | 126 | 327 | 0 | 0 | 0 | 0 | 0 | 905 |
| Montana | 7 | 11 | 525 | 4,372 | 3,375 | 1,190 | 0 | 0 | 0 | 21 |
| Utah | 1,053 | 644 | 1,565 | 1,416 | 788 | 751 | 12 | 190 | 0 | 0 |
| Wyoming | 27 | 29 | 542 | 333 | 1,556 | 2,479 | 0 | 0 | 0 | 0 |
| **PAD 4 Total** | **1,578** | **697** | **2,932** | **6,778** | **7,163** | **4,542** | **153** | **845** | **0** | **926** |
| **PAD District 5** | | | | | | | | | | |
| **Alaska** | 4 | 12 | 0 | 0 | 0 | 0 | 378 | 0 | 0 | 0 |
| **Arizona** | 0 | 79 | 137 | 50 | 0 | 44 | 890 | 4,830 | 0 | 0 |
| **California** | 6,825 | 4,076 | 3,975 | 2,074 | 8,590 | 4,656 | 75,914 | 100,119 | 477 | 558 |
| **Hawaii** | 25 | 16 | 313 | 319 | 929 | 379 | 10,271 | 10,407 | 49 | 25 |
| **Nevada** | 7 | 1 | 1 | 1 | 0 | 0 | 2,494 | 1,539 | 0 | 0 |
| **Oregon** | 878 | 418 | 2,338 | 1,203 | 177 | 106 | 0 | 0 | 4 | 0 |
| **Washington** | 427 | 161 | 5,038 | 2,112 | 1,491 | 621 | 226 | 441 | 2,377 | 832 |
| **PAD 5 Total** | **8,166** | **4,763** | **11,802** | **5,759** | **11,187** | **5,806** | **90,173** | **117,336** | **2,907** | **1,415** |
| **U.S. Total** | **90,005** | **81,216** | **154,568** | **197,914** | **56,409** | **51,308** | **390,105** | **486,636** | **9,124** | **6,718** |

(a) Preliminary; (b) Final. (Table continued on next page.)

# Residual Fuel Oil Sales (Continued)

| Destination | Railroad |  | Vessel Bunkering |  | Other |  | Total |  |
|---|---|---|---|---|---|---|---|---|
|  | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) |
| **PAD District 1** |  |  |  |  |  |  |  |  |
| New England States |  |  |  |  |  |  |  |  |
| Connecticut | 0 | 0 | 53 | 50 | 0 | 150 | 28,214 | 27,243 |
| Maine | 4 | 2 | 201 | 697 | 5 | 54 | 8,416 | 10,743 |
| Massachusetts | 2 | 0 | 889 | 946 | 253 | 326 | 52,953 | 58,957 |
| New Hampshire | 0 | 0 | 49 | 0 | 0 | 1 | 5,436 | 6,108 |
| Rhode Island | 0 | 0 | 58 | 100 | 25 | 23 | 2,230 | 2,387 |
| Vermont | 0 | 0 | 0 | 0 | 0 | 0 | 472 | 339 |
| Central Atlantic States |  |  |  |  |  |  |  |  |
| Delaware | 422 | 0 | 392 | 547 | 107 | 0 | 12,895 | 11,073 |
| District of Columbia | 0 | 0 | 0 | 50 | 26 | 0 | 436 | 767 |
| Maryland | 0 | 0 | 4,400 | 4,131 | 100 | 395 | 16,080 | 23,852 |
| New Jersey | 9 | 0 | 12,016 | 7,615 | 724 | 2,378 | 53,179 | 60,980 |
| New York | 0 | 0 | 11,367 | 11,198 | 168 | 7,399 | 112,893 | 130,340 |
| Pennsylvania | 8 | 10 | 4,591 | 4,728 | 157 | 500 | 34,762 | 45,362 |
| Lower Atlantic States |  |  |  |  |  |  |  |  |
| Florida | 0 | 0 | 11,437 | 11,194 | 235 | 289 | 96,950 | 98,717 |
| Georgia | 0 | 0 | 2,973 | 3,484 | 42 | 104 | 8,511 | 13,375 |
| North Carolina | 0 | 0 | 54 | 100 | 2 | 112 | 9,115 | 11,892 |
| South Carolina | 5 | 6 | 811 | 747 | 0 | 44 | 7,126 | 11,245 |
| Virginia | 2 | 4 | 4,288 | 4,181 | 93 | 36 | 24,690 | 34,018 |
| West Virginia | 0 | 1 | 0 | 0 | 0 | 0 | 1,466 | 1,982 |
| **PAD 1 Total** | **452** | **23** | **53,579** | **49,768** | **1,937** | **11,811** | **475,824** | **549,380** |
| **PAD District 2** |  |  |  |  |  |  |  |  |
| Illinois | 9 | 19 | 0 | 0 | 143 | 1,074 | 28,394 | 27,717 |
| Indiana | 0 | 0 | 127 | 102 | 24 | 261 | 14,644 | 17,401 |
| Iowa | 0 | 0 | 0 | 0 | 0 | 85 | 367 | 896 |
| Kansas | 2 | 26 | 0 | 0 | 0 | 11 | 1,063 | 5,006 |
| Kentucky | 0 | 0 | 0 | 0 | 0 | 0 | 1,014 | 1,230 |
| Michigan | 32 | 23 | 176 | 155 | 37 | 13 | 12,011 | 18,799 |
| Minnesota | 0 | 0 | 926 | 354 | 27 | 180 | 3,095 | 2,782 |
| Missouri | 0 | 2 | 0 | 0 | 0 | 37 | 1,426 | 3,375 |
| Nebraska | 0 | 14 | 0 | 0 | 0 | 0 | 78 | 633 |
| North Dakota | 0 | 0 | 0 | 0 | 42 | 8 | 717 | 858 |
| Ohio | 0 | 0 | 256 | 720 | 211 | 886 | 6,405 | 10,199 |
| Oklahoma | 0 | 0 | 0 | 0 | 0 | 0 | 733 | 877 |
| South Dakota | 0 | 0 | 0 | 0 | 11 | 5 | 118 | 175 |
| Tennessee | 6 | 0 | 0 | 61 | 72 | 1 | 1,502 | 2,417 |
| Wisconsin | 43 | 41 | 178 | 287 | 32 | 58 | 1,783 | 2,025 |
| **PAD 2 Total** | **92** | **125** | **1,663** | **1,679** | **599** | **2,619** | **73,350** | **94,390** |
| **PAD District 3** |  |  |  |  |  |  |  |  |
| Alabama | 0 | 0 | 2,927 | 3,553 | 21 | 5 | 7,311 | 10,329 |
| Arkansas | 0 | 0 | 0 | 0 | 0 | 0 | 4,668 | 11,261 |
| Louisiana | 0 | 0 | 28,131 | 21,629 | 279 | 828 | 62,242 | 59,842 |
| Mississippi | 0 | 0 | 5,366 | 2,704 | 16 | 0 | 15,078 | 23,409 |
| New Mexico | 0 | 0 | 0 | 0 | 5 | 29 | 939 | 561 |
| Texas | 87 | 76 | 44,880 | 49,362 | 620 | 579 | 65,392 | 70,543 |
| **PAD 3 Total** | **87** | **76** | **81,304** | **77,248** | **941** | **1,441** | **155,630** | **175,945** |
| **PAD District 4** |  |  |  |  |  |  |  |  |
| Colorado | 0 | 3 | 0 | 0 | 27 | 56 | 1,787 | 1,179 |
| Idaho | 0 | 3 | 0 | 0 | 0 | 0 | 614 | 1,235 |
| Montana | 0 | 3 | 0 | 0 | 126 | 109 | 4,033 | 5,706 |
| Utah | 0 | 0 | 0 | 0 | 38 | 160 | 3,456 | 3,161 |
| Wyoming | 0 | 8 | 0 | 0 | 48 | 117 | 2,175 | 2,966 |
| **PAD 4 Total** | **0** | **17** | **0** | **0** | **239** | **442** | **12,065** | **14,247** |
| **PAD District 5** |  |  |  |  |  |  |  |  |
| Alaska | 0 | 0 | 0 | 309 | 14 | 0 | 396 | 321 |
| Arizona | 0 | 0 | 0 | 0 | 17 | 24 | 1,044 | 5,027 |
| California | 0 | 9 | 66,330 | 47,808 | 14 | 373 | 162,125 | 159,673 |
| Hawaii | 0 | 0 | 1,395 | 1,237 | 252 | 216 | 13,234 | 12,599 |
| Nevada | 0 | 0 | 0 | 0 | 0 | 0 | 2,502 | 1,541 |
| Oregon | 0 | 1 | 1,105 | 3,773 | 18 | 4 | 4,520 | 5,505 |
| Washington | 0 | 0 | 7,755 | 8,721 | 22 | 41 | 17,336 | 12,929 |
| **PAD 5 Total** | **0** | **10** | **76,585** | **61,848** | **337** | **658** | **201,157** | **197,595** |
| **U.S. Total** | **631** | **251** | **213,131** | **190,543** | **4,053** | **16,971** | **913,026** | **1,031,557** |

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(a) Preliminary; (b) Final.

Source: Deliveries of Fuel Oil and Kerosine in 1980. Department of Energy, February 1982. See caveat on distillate fuel cil deliveries footnote.

# Kerosine Sales in 1980

(Add 000 bbl.)

| | Residential | | Commercial | | Industrial | | Farm | | Other | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Destination | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) | 1980(a) | 1979(b) |
| **PAD District 1** | | | | | | | | | | | | |
| New England States | | | | | | | | | | | | |
| Connecticut | 233 | 201 | 7 | 7 | 8 | 9 | 0 | 0 | 243 | 155 | 491 | 372 |
| Maine | 405 | 541 | 70 | 26 | 12 | 8 | 4 | 0 | 13 | 28 | 504 | 603 |
| Massachusetts | 323 | 483 | 30 | 36 | 13 | 14 | 0 | 5 | 332 | 305 | 698 | 793 |
| New Hampshire | 322 | 216 | 9 | 8 | 0 | 0 | 0 | 1 | 9 | 11 | 340 | 236 |
| Rhode Island | 54 | 46 | 0 | 1 | 4 | 5 | 0 | 0 | 26 | 44 | 84 | 96 |
| Vermont | 230 | 324 | 44 | 20 | 0 | 28 | 5 | 10 | 4 | 5 | 283 | 387 |
| Central Atlantic States | | | | | | | | | | | | |
| Delaware | 275 | 263 | 9 | 37 | 0 | 1 | 13 | 10 | 4 | 5 | 301 | 316 |
| District of Columbia | 5 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 261 | 294 | 268 | 298 |
| Maryland | 830 | 1,082 | 20 | 35 | 11 | 12 | 11 | 10 | 296 | 333 | 1,168 | 1,472 |
| New Jersey | 262 | 247 | 39 | 96 | 64 | 92 | 0 | 1 | 1,329 | 1,525 | 1,694 | 1,961 |
| New York | 1,723 | 1,962 | 169 | 220 | 56 | 94 | 32 | 26 | 329 | 1,319 | 2,309 | 3,621 |
| Pennsylvania | 2,362 | 2,040 | 193 | 178 | 90 | 100 | 44 | 42 | 74 | 577 | 2,763 | 2,937 |
| Lower Atlantic States | | | | | | | | | | | | |
| Florida | 774 | 974 | 28 | 54 | 12 | 13 | 0 | 17 | 138 | 133 | 952 | 1,191 |
| Georgia | 91 | 77 | 12 | 25 | 22 | 20 | 0 | 2 | 427 | 349 | 552 | 473 |
| North Carolina | 2,747 | 3,106 | 118 | 74 | 37 | 50 | 282 | 292 | 75 | 144 | 3,259 | 3,666 |
| South Carolina | 1,200 | 974 | 25 | 26 | 50 | 44 | 45 | 67 | 32 | 39 | 1,352 | 1,150 |
| Virginia | 1,403 | 2,302 | 46 | 46 | 57 | 52 | 41 | 116 | 169 | 211 | 1,716 | 2,727 |
| West Virginia | 408 | 664 | 37 | 34 | 15 | 35 | 4 | 1 | 32 | 67 | 496 | 801 |
| **PAD 1 Total** | **13,647** | **15,454** | **857** | **924** | **452** | **578** | **481** | **600** | **3,793** | **5,544** | **19,230** | **23,100** |
| **PAD District 2** | | | | | | | | | | | | |
| Illinois | 161 | 419 | 16 | 16 | 238 | 294 | 10 | 26 | 181 | 165 | 606 | 920 |
| Indiana | 492 | 535 | 31 | 52 | 16 | 15 | 73 | 22 | 47 | 175 | 659 | 799 |
| Iowa | 47 | 245 | 5 | 10 | 21 | 0 | 41 | 100 | 57 | 105 | 171 | 460 |
| Kansas | 5 | 329 | 10 | 94 | 36 | 6 | 192 | 43 | 249 | 326 | 492 | 798 |
| Kentucky | 1,751 | 2,075 | 622 | 408 | 140 | 315 | 0 | 106 | 399 | 641 | 2,912 | 3,545 |
| Michigan | 83 | 142 | 15 | 105 | 104 | 272 | 5 | 10 | 1,026 | 1,006 | 1,233 | 1,535 |
| Minnesota | 114 | 97 | 0 | 21 | 0 | 11 | 10 | 53 | 88 | 35 | 212 | 217 |
| Missouri | 57 | 45 | 171 | 283 | 5 | 11 | 41 | 43 | 41 | 80 | 315 | 462 |
| Nebraska | 10 | 26 | 21 | 5 | 0 | 6 | 21 | 10 | 10 | 10 | 62 | 57 |
| North Dakota | 5 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 15 | 0 |
| Ohio | 1,016 | 1,618 | 130 | 84 | 337 | 741 | 249 | 174 | 720 | 956 | 2,452 | 3,573 |
| Oklahoma | 21 | 6 | 15 | 27 | 26 | 32 | 0 | 169 | 280 | 411 | 342 | 645 |
| South Dakota | 10 | 13 | 0 | 0 | 5 | 0 | 0 | 22 | 0 | 0 | 15 | 35 |
| Tennessee | 549 | 773 | 104 | 152 | 72 | 325 | 11 | 36 | 798 | 1,091 | 1,534 | 2,377 |
| Wisconsin | 124 | 122 | 57 | 10 | 41 | 84 | 0 | 0 | 0 | 5 | 222 | 221 |
| **PAD 2 Total** | **4,445** | **6,445** | **1,197** | **1,267** | **1,041** | **2,112** | **663** | **814** | **3,896** | **5,006** | **11,242** | **15,644** |
| **PAD District 3** | | | | | | | | | | | | |
| Alabama | 198 | 136 | 176 | 246 | 110 | 116 | 0 | 11 | 769 | 627 | 1,253 | 1,136 |
| Arkansas | 0 | 73 | 132 | 45 | 176 | 128 | 22 | 53 | 241 | 189 | 571 | 488 |
| Louisiana | 0 | 31 | 549 | 692 | 1,779 | 321 | 66 | 11 | 3,317 | 2,132 | 5,711 | 3,187 |
| Mississippi | 44 | 10 | 0 | 0 | 44 | 43 | 0 | 0 | 154 | 687 | 242 | 740 |
| New Mexico | 132 | 42 | 659 | 11 | 109 | 523 | 0 | 0 | 439 | 319 | 1,339 | 895 |
| Texas | 198 | 94 | 3,251 | 10,172 | 2,900 | 1,280 | 725 | 118 | 8,281 | 6,006 | 15,355 | 17,670 |
| **PAD 3 Total** | **572** | **386** | **4,767** | **11,166** | **5,118** | **2,411** | **813** | **193** | **13,201** | **9,960** | **24,471** | **24,116** |
| **PAD District 4** | | | | | | | | | | | | |
| Colorado | 23 | 25 | 6 | 33 | 212 | 25 | 23 | 9 | 149 | 184 | 413 | 276 |
| Idaho | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 108 | 0 | 125 |
| Montana | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| Utah | 0 | 8 | 34 | 58 | 17 | 92 | 0 | 0 | 51 | 0 | 102 | 158 |
| Wyoming | 0 | 9 | 23 | 34 | 33 | 8 | 6 | 0 | 0 | 42 | 62 | 93 |
| **PAD 4 Total** | **23** | **42** | **63** | **159** | **262** | **125** | **29** | **9** | **200** | **334** | **577** | **669** |
| **PAD District 5** | | | | | | | | | | | | |
| Alaska | 0 | 761 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 291 | 19 | 1,052 |
| Arizona | 0 | 61 | 0 | 11 | 55 | 11 | 9 | 0 | 9 | 17 | 73 | 100 |
| California | 18 | 79 | 222 | 243 | 1,609 | 83 | 74 | 24 | 194 | 2,996 | 2,117 | 3,425 |
| Hawaii | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 9 | 28 | 9 | 40 |
| Nevada | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Oregon | 37 | 63 | 37 | 45 | 19 | 17 | 0 | 0 | 19 | 35 | 112 | 160 |
| Washington | 65 | 135 | 18 | 17 | 0 | 5 | 0 | 0 | 37 | 101 | 120 | 258 |
| **PAD 5 Total** | **120** | **1,099** | **277** | **328** | **1,683** | **116** | **83** | **30** | **287** | **3,468** | **2,450** | **5,041** |
| **U.S. Total** | **18,807** | **23,426** | **7,161** | **13,844** | **8,556** | **5,342** | **2,069** | **1,646** | **21,377** | **24,312** | **57,970** | **68,570** |

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(a) Preliminary; (b) Final.

Source: Deliveries of Fuel Oil and Kerosine in 1980. Department of Energy, February, 1982. See caveat on distillate fuel oil deliveries footnote.

# U.S. Sales of Distillate Fuel Oil By Uses (a)

(Add 000 bbl.)

| Year | Residential | Commercial | Industrial | Farm | Oil Company | Electric Utilities | Diesel | Other | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1980 (a) | 224,902 (b) | 88,471 (b) | 79,092 (c) | 65,595 (d) | 18,071 (c) | 31,812 | 368,456 (e) | 172,576 (f) | 1,048,975 |
| 1979 (a) | 274,639 (b) | 98,557 (b) | 97,325 (c) | 83,715 (d) | 20,065 (c) | 46,579 | 390,504 (e) | 197,072 (f) | 1,208,456 |

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(a) In 1979, DOE changed its sampling and reporting formulas. It eliminated the "heating oils" category and added a new farm category. The sum of the first four categories is roughly related to the old heating oil category but cannot be considered comparable; (b) Primarily space and water heating; (c) Includes some space heating but primarily equipment fuel; (d) Includes space and water heating, crop drying, farm equipment, etc.; (e) Includes 323,431,000 on-highway and 45,025,000 off-highway in 1980, and 327,402,000 on-highway and 65,102,000 off-highway in 1979; (f) Includes 105,841,000 railroad, 28,166,000 vessel bunkering, 20,152,000 military and 18,412,000 miscellaneous in 1980, and 106,652,000 railroad, 38,826,000 vessel bunkering, 17,810,000 military and 33,784,000 miscellaneous in 1979. The pre-1979 categories follow.

| Year | Heating Oils | Industrial Use | Oil Company Use | Electric Utilities | Railroads | Vessel Bunkering | Military Use | Diesel Fuel | All Other | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 1978 | 533,069 | 94,797 | 19,410 | 77,175 | 99,841 | 37,591 | 20,320 | 367,799 | 14,509 | 1,257,061 |
| 1977 | 538,845 | 96,502 | 19,954 | 76,681 | 99,306 | 33,512 | 20,121 | 330,864 | 14,394 | 1,230,179 |
| 1976 | 543,895 | 79,956 | 14,523 | 60,570 | 97,467 | 28,330 | 17,574 | 297,249 | 11,365 | 1,150,929 |
| 1975 | 488,388 | 63,993 | 13,633 | 63,420 | 93,191 | 26,138 | 18,004 | 266,903 | 10,096 | 1,043,746 |
| 1970 | 521,135 | 43,668 | 11,518 | 24,770 | 88,416 | 19,503 | 12,447 | 194,919 | 10,874 | 927,250 |
| 1965 | 475,992 | 42,484 | 10,430 | 3,661 | 86,436 | 15,532 | 14,953 | 124,122 | 13,281 | 786,891 |
| 1960 | 438,010 | 34,271 | 8,347 | 4,742 | 86,490 | 18,730 | 10,793 | 74,562 | 7,380 | 683,325 |

Source: Deliveries of Fuel Oil and Kerosine in 1980, Department of Energy, February 1982.

# U.S. Sales of Residual Fuel Oil By Uses (a)

(Add 000 bbl.)

| Year | Vessel Bunkering | Electric Utilities | Railroads | Oil Company | Industrial | Commercial | Military | Other | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1980 (a) | 213,131 | 390,105 | 631 | 56,409 | 154,568 | 90,005 | 9,124 | 4,053 | 918,026 |
| 1979 (a) | 190,543 | 486,636 | 251 | 51,308 | 197,914 | 81,216 | 6,718 | 16,971 | 1,031,557 |

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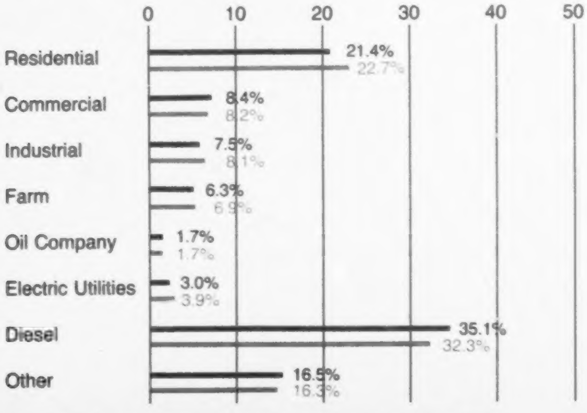
(a) In 1979, DOE changed its sampling and reporting formulas in such a way that most of the new data are not directly comparable to the pre-1979 data, which follows.

| Year | Vessel Bunkering | Electric Utilities | Railroads | Oil Company | Industrial Use | Heating Oils | Military Use | All Other | Total |
|---|---|---|---|---|---|---|---|---|---|
| 1978 | 157,495 | 533,193 | 206 | 57,690 | 169,403 | 164,536 | 16,583 | 4,127 | 1,103,233 |
| 1977 | 128,966 | 569,429 | 329 | 60,582 | 171,967 | 168,279 | 16,646 | 4,729 | 1,129,927 |
| 1976 | 117,458 | 492,974 | 423 | 58,212 | 153,596 | 178,139 | 18,561 | 5,785 | 1,025,148 |
| 1975 | 96,673 | 454,935 | 583 | 50,487 | 116,675 | 154,103 | 19,068 | 6,066 | 898,572 |
| 1970 | 89,850 | 312,420 | 2,222 | 38,318 | 139,647 | 185,031 | 28,704 | 7,925 | 804,287 |
| 1965 | 73,639 | 114,884 | 4,001 | 34,354 | 140,602 | 156,254 | 40,380 | 10,004 | 574,118 |
| 1960 | 94,084 | 85,408 | 5,610 | 45,061 | 157,270 | 125,088 | 31,724 | 6,291 | 550,536 |

## Sales of Distillates by Use as Percent of Total

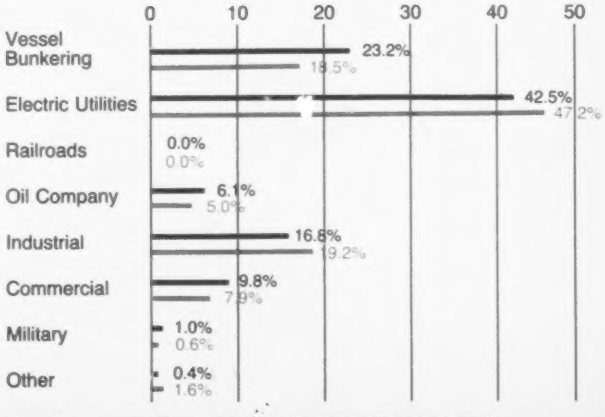
1980 = 1,048,975,000 bbl. 1979 = 1,208,456,000 bbl.



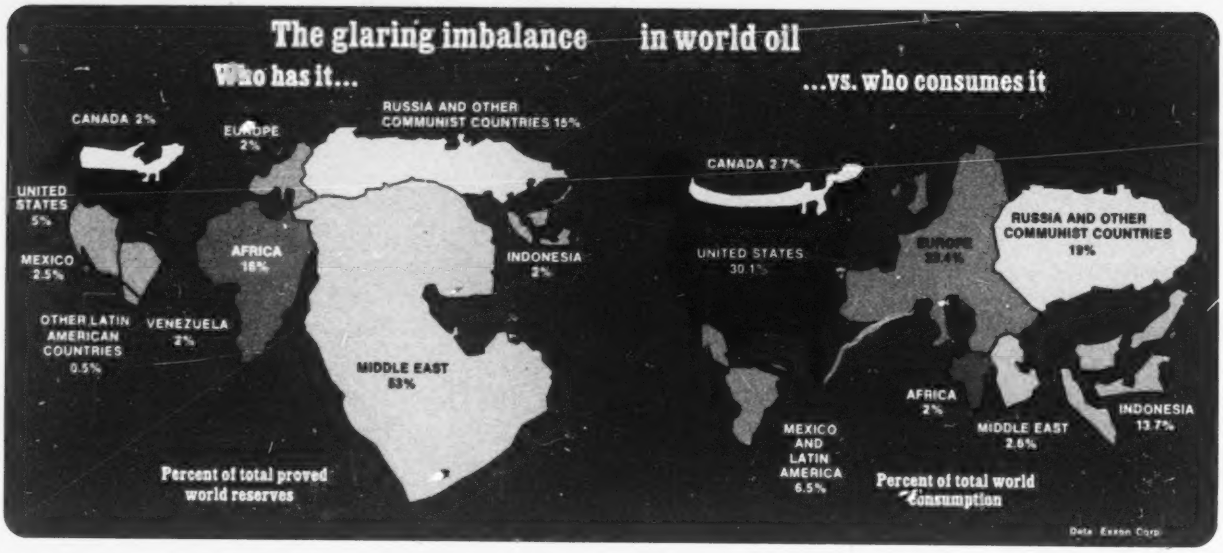
Source: Department of Energy, Deliveries of Fuel Oil and Kerosine in 1980.

## Sales of Residuals by Use as Percent of Total

1980 = 918,026,000 bbl. 1979 = 1,031,557,000 bbl.



Source: Department of Energy, Deliveries of Fuel Oil and Kerosine in 1980.


The glaring imbalance in world oil
Who has it...
...vs. who consumes it
CANADA 2%
EUROPE 2%
RUSSIA AND OTHER COMMUNIST COUNTRIES 15%
UNITED STATES 5%
MEXICO 2.5%
AFRICA 16%
INDONESIA 2%
OTHER LATIN AMERICAN COUNTRIES 0.5%
VENEZUELA 2%
MIDDLE EAST 53%
Percent of total proved world reserves
CANADA 2.7%
EUROPE 23.4%
RUSSIA AND OTHER COMMUNIST COUNTRIES 19%
UNITED STATES 30.1%
AFRICA 2%
INDONESIA 13.7%
MIDDLE EAST 2.6%
MEXICO AND LATIN AMERICA 6.5%
Percent of total world consumption

Data: Exxon Corp.

## World Crude-Oil Reserves by Area (a)

(Add 000 bbl.)

| Year | United States | Canada | Latin America | Middle East | Africa | Asia | Western Europe | Total World (b) |
|---|---|---|---|---|---|---|---|---|
| 1981 | 26,400,000 | 6,400,000 | 69,489,837 | 362,071,000 | 55,148,375 | 19,630,500 | 23,085,000 | 562,224,712 |
| 1980 | 27,051,289 | 6,800,000 | 56,472,500 | 361,947,300 | 57,072,100 | 19,355,200 | 23,476,400 | 642,174,789 |
| 1979 | 27,803,760 | 6,860,000 | 41,246,500 | 369,996,000 | 57,892,125 | 20,007,200 | 23,966,000 | 641,907,585 |
| 1978 | 29,486,402 | 5,970,872 | 40,370,000 | 366,166,000 | 59,200,150 | 19,749,270 | 26,862,500 | 645,805,194 |

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(a) As of Jan. 1, 1981; (b) Includes 86.3-billion in 1981, and 90-billion bbl. in 1980, and 34-billion bbl. in 1979, and 98-billion bbl. in 1978 for USSR and satellite countries.

Source: Department of Energy American Petroleum Institute Basic Data Book.

## World Oil Production by Area

(Add 000 bbl.)

| Year | United States (a) | Canada | Latin America | Middle East | Africa | Asia | Total Free World | Total World |
|---|---|---|---|---|---|---|---|---|
| 1980 | 3,149,064 | 518,256 | 2,045,940 | 6,735,132 | 2,213,568 | 999,912 | 16,555,278 | 21,770,046 |
| 1979 | 3,114,545 | 546,040 | 1,917,710 | 7,867,940 | 2,417,395 | 1,028,935 | 17,721,115 | 22,839,145 |
| 1978 | 3,175,927 | 483,260 | 1,736,427 | 7,884,927 | 2,233,791 | 1,037,520 | 17,195,001 | 22,158,251 |
| 1977 | 3,009,265 | 482,021 | 1,649,640 | 8,118,037 | 2,292,558 | 1,016,688 | 17,033,632 | 21,826,249 |

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(a) Includes lease condensate.

Source: Department of Energy American Petroleum Institute Basic Data Book.

## World Crude-Oil Refining Capacity by Area (a)

| Year | United States | Other Western Hemisphere | Total Western Hemisphere | Middle East | Africa | Asia | Europe | Total Free World | Sino Soviet Bloc | Total World |
|---|---|---|---|---|---|---|---|---|---|---|
| 1981 | 18,400,000 | 10,716,881 | 29,116,881 | 3,729,646 | 1,697,658 | 10,554,691 | 20,205,799 | 65,304,675 | 16,036,500 | 81,341,175 |
| 1980 | 17,825,967 | 10,683,671 | 28,509,638 | 3,518,080 | 1,666,108 | 10,386,375 | 20,243,747 | 64,323,948 | 15,346,000 | 79,666,948 |
| 1979 | 17,440,885 | 10,273,000 | 27,713,915 | 3,546,029 | 1,667,608 | 10,248,966 | 20,328,614 | 63,541,132 | 14,748,000 | 78,289,132 |
| 1978 | 17,047,724 | 10,592,020 | 27,352,020 | 3,506,484 | 1,467,157 | 10,176,819 | 20,728,204 | 63,352,984 | 13,938,000 | 77,290,984 |

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(a) As of Jan. 1, 1981 on a b/d basis

Source: American Petroleum Institute Basic Data Book.

## World Natural-Gas Production by Area

(000,000 cubic feet)

| Year | United States | Canada | Latin America | Western Hemisphere Total | Middle East | Africa | Asia | Western Europe | Total World |
|---|---|---|---|---|---|---|---|---|---|
| 1980 | 20,090,000 | 2,688,300 | 3,297,500 | 26,055,800 | 1,221,300 | 884,700 | 2,558,400 | 6,668,700 | 58,458,800 |
| 1979 | 20,471,260 | 3,646,500 | 2,610,000 | 26,727,760 | 1,624,700 | 1,027,900 | 1,827,900 | 6,866,800 | 57,666,460 |
| 1978 | 19,974,033 | 3,133,100 | 2,535,500 | 25,640,633 | 2,640,400 | 1,158,160 | 1,640,000 | 4,793,700 | 53,911,133 |
| 1977 | 20,025,463 | 3,160,525 | 1,828,267 | 25,024,255 | 1,463,111 | 959,152 | 1,366,201 | 6,527,278 | 47,207,325 |
| 1976 | 19,952,438 | 3,067,353 | 1,722,106 | 24,741,897 | 1,492,772 | 905,792 | 1,173,878 | 6,343,593 | 49,459,213 |
| 1975 | 20,108,661 | 3,075,693 | 1,735,060 | 24,919,414 | 1,436,210 | 670,402 | 938,365 | 5,966,659 | 47,207,325 |

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Source: Department of Energy/American Petroleum Institute Basic Data Book.

# Estimated Crude Oil Reserves for 20 Leading Nations

| Nation | (Add 000 bbl.) Reserves 1981(a) | (Add 000 bbl.) Reserves 1980(a) | % of Free World Reserves 1981 | % of Free World Reserves 1980 | % of Total World Reserves 1981 | % of Total World Reserves 1980 |
|---|---|---|---|---|---|---|
| 1. Saudi Arabia (b) | 165,000,000 | 163,350,000 | 29.3% | 29.6% | 25.4% | 25.4% |
| 2. Kuwait (b) | 64,900,000 | 67,000,000 | 11.5 | — | 10.0 | 10.4 |
| 3. U.S.S.R. | 63,000,000 | 65,400,000 | — | 11.8 | 9.7 | 10.2 |
| 4. Iran | 57,500,000 | 58,000,000 | 10.2 | 10.5 | 8.9 | 9.0 |
| 5. Mexico | 44,000,000 | 31,250,000 | 7.8 | 5.7 | 6.8 | 4.9 |
| 6. Iraq | 30,000,000 | 31,000,000 | 5.3 | 5.6 | 4.6 | 4.8 |
| 7. Abu Dhabi | 29,000,000 | 28,000,000 | 5.2 | 5.1 | 4.5 | 4.4 |
| 8. U.S.A. | 26,400,000 | 27,051,289 | 4.7 | 4.9 | 4.1 | 4.2 |
| 9. Libya | 23,000,000 | 23,500,000 | 4.1 | 4.3 | 3.5 | 3.7 |
| 10. China | 20,500,000 | 20,000,000 | — | — | 3.2 | 3.1 |
| 11. Venezuela | 17,950,000 | 17,870,000 | 3.2 | 3.2 | 2.8 | 2.8 |
| 12. Nigeria | 16,700,000 | 17,400,000 | 3.0 | 3.2 | 2.6 | 2.7 |
| 13. United Kingdom | 14,800,000 | 15,400,000 | 2.6 | 2.8 | 2.3 | 2.4 |
| 14. Indonesia | 9,500,000 | 9,600,000 | 1.7 | 1.7 | 1.5 | 1.5 |
| 15. Algeria | 8,200,000 | 8,440,000 | 1.5 | 1.5 | 1.3 | 1.3 |
| 16. Canada | 6,400,000 | 6,800,000 | 1.1 | 1.2 | 1.0 | 1.1 |
| 17. Norway | 5,500,000 | 5,750,000 | 1.0 | 1.0 | 0.8 | 0.9 |
| 18. Qatar | 3,585,000 | 3,760,000 | 0.6 | 0.7 | 0.6 | 0.6 |
| 19. Malaysia | 3,000,000 | 3,100,000 | 0.5 | 0.6 | 0.5 | 0.5 |
| 20. Egypt (c) | 2,900,000 | 2,800,000 | 0.5 | 0.5 | 0.4 | 0.4 |
| **Total Free World** | **562,224,712** | **552,174,789** | **100.0%** | **100.0%** | **86.7%** | **86.0%** |
| **Total World** | **648,524,712** | **642,174,789** | — | — | **100.0%** | **100.0%** |

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(a) As of Jan. 1, 1981 and Jan. 1, 1980. (b) Saudi Arabia and Kuwait share equally the production from the Neutral Zone located between the two nations which had reserves of 6.5-million bbl. in 1981 and 6.3-million bbl. in 1980. These reserves are not included in the above figures; (c) Includes Gulf of Suez fields returned by Israel in 1979.

Source: American Petroleum Institute Basic Data Book.

# Crude Production in 20 Leading Nations

| Nation | Production (Add 000 bbl.) 1980 Total | Production (Add 000 bbl.) 1980 b/d | Production (Add 000 bbl.) 1979 Total | Production (Add 000 bbl.) 1979 b/d | % of Free World Production 1980 | % of Free World Production 1979 | % of Total World Production 1980 | % of Total World Production 1979 |
|---|---|---|---|---|---|---|---|---|
| 1. U.S.S.R. | 4,289,520 | 11,720 | 4,187,280 | 11,472 | — | — | 19.7% | 18.2% |
| 2. Saudi Arabia | 3,523,116 | 9,626 | 3,376,615 | 9,251 | 21.3% | 18.9% | 16.2 | 14.2 |
| 3. United States (a) | 3,149,064 | 8,604 | 3,114,545 | 8,533 | 19.0 | 17.4 | 14.5 | 13.6 |
| 4. Iraq | 920,124 | 2,514 | 1,269,105 | 3,477 | 5.6 | 7.1 | 4.2 | 5.5 |
| 5. Venezuela | 793,122 | 2,167 | 1,156,320 | 3,168 | 4.8 | 6.5 | 3.6 | 5.0 |
| 6. People's Rep. of China | 773,724 | 2,114 | 859,940 | 2,356 | — | 4.8 | 3.6 | 3.7 |
| 7. Nigeria | 752,130 | 2,055 | 840,230 | 2,302 | 4.5 | 4.7 | 3.5 | 3.7 |
| 8. Mexico (a) | 708,942 | 1,937 | 807,745 | 2,213 | 4.3 | 4.5 | 3.3 | 3.5 |
| 9. Libya | 654,042 | 1,787 | 774,530 | 2,122 | 4.0 | 4.3 | 3.0 | 3.4 |
| 10. United Arab Emirates | 625,494 | 1,709 | 763,580 | 2,092 | 3.8 | 4.3 | 2.9 | 3.3 |
| 11. Iran | 608,292 | 1,662 | 668,315 | 1,831 | 3.7 | 3.7 | 2.8 | 2.9 |
| 12. United Kingdom | 592,554 | 1,619 | 580,715 | 1,591 | 3.6 | 3.3 | 2.7 | 2.5 |
| 13. Indonesia | 577,182 | 1,577 | 572,320 | 1,568 | 3.5 | 3.2 | 2.7 | 2.5 |
| 14. Canada (a) | 518,256 | 1,416 | 546,040 | 1,496 | 3.1 | 3.1 | 2.4 | 2.4 |
| 15. Kuwait | 507,642 | 1,387 | 533,265 | 1,461 | 3.1 | 3.0 | 2.3 | 2.3 |
| 16. Algeria (a) | 379,542 | 1,037 | 415,005 | 1,137 | 2.3 | 2.3 | 1.7 | 1.8 |
| 17. Egypt | 217,770 | 595 | 207,320 | 568 | 1.3 | 1.2 | 1.0 | 0.9 |
| 18. Neutral Zone | 196,908 | 538 | 191,625 | 525 | 1.2 | 1.1 | 0.9 | 0.8 |
| 19. Norway | 193,248 | 528 | 187,975 | 515 | 1.2 | 1.1 | 0.9 | 0.8 |
| 20. Brunei-Malaysia | 189,588 | 518 | 185,420 | 508 | 1.1 | 1.0 | 0.9 | 0.8 |
| **Total Free World** | **16,555,278** | **45,233** | **17,852,515** | **48,911** | **100.0%** | **100.0%** | **76.0%** | **77.7%** |
| **Total World** | **21,770,046** | **59,481** | **22,970,545** | **62,933** | — | — | **100.0%** | **100.0%** |

---

(a) Includes lease condensate.

Source: American Petroleum Institute Basic Data Book.

# World Reserves of Crude Oil (a) (Add 000,000 bbl.)

| Year | United States | Canada | Latin America | Total Western Hemisphere | Middle East | Africa | Asia-Pacific | Western Europe | Total Free World | Total World (b) |
|---|---|---|---|---|---|---|---|---|---|---|
| 1979 | 27,803,760 | 6,860,000 | 41,246,500 | 75,910,260 | 369,996,000 | 57,892,125 | 20,007,200 | 23,966,000 | 547,771,585 | 641,771,585 |
| 1980 | 27,051,289 | 6,800,000 | 56,472,500 | 90,323,789 | 361,947,300 | 57,072,100 | 19,355,200 | 23,476,400 | 522,174,789 | 642,174,789 |
| 1981 | 26,400,000 | 6,400,000 | 69,489,837 | 102,289,837 | 362,071,000 | 55,148,375 | 19,630,500 | 23,085,000 | 562,224,712 | 648,524,712 |

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(a) As of Jan. 1 of each year; (b) Total world includes estimated reserves for communist nations as follows: 1979—94-billion bbl.; 1980—90-billion bbl.; 1981—86.3-billion bbl.

Source: American Petroleum Institute Basic Data Book.

# Canadian Oil Companies: How

| Company | TOTAL BRANDED RETAIL OUTLETS | Number of Provinces where marketed | BRANDED SERVICE STATIONS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total branded service stations | Supplied directly | Supplied through jobbers & commission agents | Lessee/Dealer operated | Salary operated | Commission operated | 100% Full service | 100% Self-service | Service and self-service |
| BP Canada, Inc. | 1,661 | 2 | 1,661 | 1,385 | 276 | 1,062 | — | 599 | 1,406 | 253 | 2 |
| Caloil, Inc. (A) | 85 | 2 | 85 | 85 | — | 27 | — | 58 | 82 | 3 | — |
| Chevron Canada Ltd. | 331 | 1 | 290 | 162 | 128 | 233 | — | 57 | 227 | 60 | 3 |
| Federated Co-ops Ltd. | 724 | 4 | 384 | 384 | — | 384 | — | — | — | 116 | 268 |
| Gulf Canada Ltd. (A | 2,715 | 10 | 2,715 | — | — | 2,551 | 164 | — | 2,360 | 354 | 1 |
| Husky Oil Ltd. | 330 | 6 | 330 | 330 | 0 | 330 | 0 | 0 | 263 | 27 | 5 |
| Imperial Oil Ltd. | 3,719 | 10 | 3,719 | 2,469 | 1,250 | 3,216 | 80 | 423 | 3,192 | 527 | — |
| Irving Oil Ltd. (B) | — | — | — | — | — | — | — | — | — | — | — |
| Mohawk Oil Co. Ltd. | 257 | 5 | 257 | 257 | 0 | 191 | 59 | 7 | 204 | 50 | 3 |
| Petro-Canada Exploration, Inc. (A) | 352 | 5 | 352 | 272 | 80 | 297 | — | 55 | 267 | 74 | 11 |
| Petrofina Canada, Inc. | 932 | 5 | 932 | 932 | 0 | 860 | 36 | 36 | 828 | 104 | 0 |
| Shell Canada Ltd. | 3,628 | 9 | 3,628 | 2,557 | 1,071 | 3,080 | 127 | 421 | 3,099 | 529 | NA |
| Spur Oil Ltd. (A) | 138 | 2 | 97 | — | — | 97 | — | — | 87 | 10 | — |
| Sunoco, Inc. | 870 | 2 | 821 | 801 | 20 | 125 | 140 | 2 | 680 | 140 | 1 |
| Texaco Canada, Ltd. | 2,913 | 10 | 2,913 | 2,913 | — | 2,441 | — | 472 | 2,441 | 472 | — |
| Turbo Resources Ltd. | 304 | 5 | 293 | 218 | 63 | 187 | 1 | 93 | 204 | 10 | — |
| Top Valu Gasmarts | 120 | 2 | 120 | 120 | — | 58 | 20 | 42 | 116 | 3 | 1 |
| Ultramar Canada, Inc. | 842 | 3 | 842 | 842 | — | 808 | 34 | — | 824 | 10 | 8 |

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(A) Most recent information available; company did not respond to 1982 questionnaire.
(B) Irving refuses to disclose any of its operational details.

Source: NPN Questionnaires.

## Brand Names of Gasoline and Motor Oil

**BP Canada, Inc.**

| Gasolines | Motor Oils |
|---|---|
| BP Regular (r) | BP Vanellus CC |
| BP No-Lead (xr) | BP Energol HD |
| BP Super No-Lead (xp) | BP Vanellus MCS-3 |
| | BP Vanellus C-3 Extra |
| | BP Super Engine Oil |
| | Super Visco Static |
| | Super Visco Static 5W 40 |

**Caloil Inc.**

| Gasolines | Motor Oils |
|---|---|
| Calex (r) | |
| Calex Unleaded (xr&xp) | |

**Chevron Canada Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Chevron Regular (r&xr) | Chevron Special |
| Chevron Premium (p) | Chevron Supreme |
| Chevron Supreme (xp) | Chevron Custom |
| | Chevron Delo |

**Federated Co-Ops Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Sonic (r&p) (xr&xp) | HD 7 |
| | D-MO |
| | Sonic Prem. |
| | Multrex |

**Gulf Canada Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Gulf (r, xsp) | Gulf Premium Multigrade |
| | Super Premium Multigrade |

**Husky Oil Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Husky (r&p) | Husky Superlube |
| Husky (x) | Husky Heavy Duty |
| | Husky HD Special |
| | Husky Stratolube |
| | Husky Stratolube "6000" |

**Imperial Oil Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Esso (r) | Essolube HD |
| Esso 2000 (xr) | Essolube HDX Plus |
| Esso Extra Unleaded (xp) | Essolube HD 3 |
| | Esso Plus |
| | Esso Extra |
| | Uniflo |

**Mohawk Oil Co. Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Mohawk (r) (xr&xp) | Mohawk Premium |
| | Mohawk S. Duty |
| | Mohawk MultiGrade 10/30 |
| | ATF Dextron |
| | Outboard Motor Oil |

**Murphy Oil Co. Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Spur (r) (xr&xp) | Spur Supreme |
| Gas (r) (xr&xp) ( + ) | Spur HD |
| | Spur Regular |
| | Spur A.T.F. |
| | Spur 2 Stroke |

**Petro-Canada Exploration**

| Gasolines | Motor Oils |
|---|---|
| Pacific 66 (r, xr&xp) | MM |
| | Petro-Lube |
| | Heavy Duty Commercial |
| | Super Heavy Duty |
| | Premium Single Grade |
| | Premium All Season |

**Petrofina Canada Inc.**

| Gasolines | Motor Oils |
|---|---|
| Fina Regular (r) | Regular M.O. Single Grade |
| Fina Lead-Free (xr) | Dieseltonic H.D. 30 |
| Fina Super 100 Lead-Free (xp) | Universal MG 15W40 |
| | Heavy Duty 10W 20-20W, 30, 40 |
| | Multi 10W30 |
| | Multi-Plus 5W30-10W40 |

**Shell Canada Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Shell (r) | Shell X-100 30 |
| Shell Ultra (x) | Shell X-100 Multigrade 10W/30 |
| Shell Super Non-leaded (xp) | Shell Super Plus 5W/30 10W/40 |
| | Shell Super Plus Arctic Multigrade 0W/30 |

**Spur Oil Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Spur (r) | Castrol Distributorship |
| Spur (rx) | Spur Supreme |
| Spur (px) | |

**Sunoco Inc.**

| Gasolines | Motor Oils |
|---|---|
| Sunoco Regular (r) (xr) | Dynalube, Pronto |
| Sunoco ½ + ½ (x) | Sunfleet, Dieselube |
| Sunoco Premium (p) (xp) | Special |
| | Cam 2 |

**Texaco Canada Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Fire Chief | Havoline Motor Oil |
| Sky Chief (p) (x) | Havoline 10W-30 |
| Lead-free Texaco (r) (x) | Havoline 5W-30 |
| | Super Premium 10W-40 |

**Top Value Gasmarts**

| Gasolines | Motor Oils |
|---|---|
| Top Valu (r) | Burmak |
| Top Valu (rx) | Burmak |
| Top Valu (px) | Veedol |
| Payless (r + ) | Castrol |
| Payless (r + x) | |

**Turbo Resources Ltd.**

| Gasolines | Motor Oils |
|---|---|
| Turbo (x) | Turbo HD 1 |
| Turbo No-lead (xr&xp) | Turbo SD 1 |
| Turbo (px) | Turbo Multi-Service |
| | Turbo Supreme |

**Ultramar Canada Inc.**

| Gasolines | Motor Oils |
|---|---|
| Ultramar (r&p)(xr&xp) | Ultralube |
| Ultramar (xsp) | Ultralube Monograde HD |
| XL (r, xr&xp) ( + ) | Ultralube Super Multigrade |
| Arrow (r, xr&xp) ( + ) | |

**Key**
**Gasoline**
**(r) Regular**
**(p) Premium**
**(sp) Super premium**
**(x) Unleaded**

**Motor oil . . . Brand names are listed with lowest price grade first**

# Distribution Is Organized

| BRANDED JOBBERS | | | | COMMISSION AGENTS | | | | BULK PLANTS | | | | TERMINALS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SELLING . . . | | | | SELLING . . . | | | | COMPANY OPERATED | | | | COMPANY OPERATED | | | |
| Total | Gasoline only | Fuel Oil only | Gasoline and fuel oil | Total | Gasoline only | Fuel oil only | Gasoline and Fuel oil | Total | Salary operated | Commission operated | Jobber operated | Total | Salary operated | Commission operated | Jobber operated |
| 3 | 1 | — | 2 | 149 | — | 3 | 146 | 91 | 1 | 89 | 1 | 1 | 6 | 6 | 0 |
| 37 | 37 | — | — | — | — | — | — | 3 | 1 | 2 | 4 | 1 | 1 | 0 | 0 |
| 1 | — | — | 1 | 49 | — | — | 49 | 49 | — | 49 | 0 | 2 | 2 | — | 0 |
| — | — | — | — | — | — | — | — | 340 | 340 | — | — | — | — | — | — |
| 243 | — | — | — | 268 | — | — | — | 104 | 85 | 19 | 268 | 1 | — | — | — |
| 40 | — | — | 40 | 0 | — | — | — | 6 | — | — | 0 | 1 | 1 | — | — |
| 0 | — | — | — | 692 | — | 2 | 690 | 665 | — | 665 | — | 63 | 56 | 7 | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | 7 | 7 | — | — | 3 | — | — | 5 | — | — | — | — |
| 25 | 18 | — | 7 | 55 | 54 | — | 1 | — | — | — | — | 2 | 2 | — | — |
| 0 | — | — | — | 123 | 0 | 0 | 123 | 33 | 22 | 11 | 0 | 12 | 12 | 0 | 0 |
| 306 | — | 18 | 288 | 204 | — | — | 204 | 245 | 45 | 200 | 240 | 25 | 25 | 0 | 0 |
| 92 | 41 | 48 | 3 | 0 | — | — | — | 3 | — | 3 | 3 | 3 | 3 | — | — |
| 41 | — | — | 41 | 2 | 2 | — | — | 21 | 21 | — | 4 | 7 | 7 | — | 0 |
| 0 | — | — | — | 413 | — | — | 413 | 223 | 29 | 194 | — | 35 | 35 | — | 0 |
| 12 | — | — | 12 | 14 | — | — | 14 | 20 | — | 8 | 12 | 1 | 1 | — | — |
| 5 | — | — | 5 | 42 | 42 | — | — | 0 | — | — | — | — | — | — | — |
| — | — | — | — | 67 | — | — | 67 | 84 | 84 | 84 | NA | 47 | 47 | 47 | NA |

## Branded Retail Outlets in Canada

| Company | Total | No. of Provinces | Newfoundland | Nova Scotia | New Brunswick | Quebec | Ontario | Prince Edward Island | Manitoba | Saskatchewan | Alberta | British Columbia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BP Canada, Inc. . . . . . . . . . . . . . . . . | 1,661 | 2 | — | — | — | 636 | 1,025 | — | — | — | — | — |
| Caloil, Inc. (A) . . . . . . . . . . . . . . . . . | 85 | 2 | — | — | — | 78 | 7 | — | — | — | — | — |
| Chevron Canada Ltd. . . . . . . . . . . | 331 | 1 | — | — | — | — | — | — | — | — | — | 331 |
| Federated Co-ops Ltd. . . . . . . . . . | 724 | 4 | — | — | — | — | — | — | 132 | 477 | 91 | 24 |
| Gulf Canada Ltd. (A) . . . . . . . . . . . | 2,715 | 10 | 70 | 76 | 60 | 547 | 630 | 6 | 248 | 338 | 425 | 289 |
| Husky Oil Ltd. . . . . . . . . . . . . . . . . . | 330 | 6 | 0 | 0 | 0 | 0 | 78 | 0 | 43 | 28 | 95 | 84 |
| Imperial Oil Ltd. . . . . . . . . . . . . . . | 3,719 | 10 | 192 | 203 | 175 | 759 | 867 | 45 | 267 | 357 | 389 | 465 |
| Irving Oil Ltd. (B) . . . . . . . . . . . . | — | — | — | — | — | — | — | — | — | — | — | — |
| Mohawk Oil Co. Ltd. (A) . . . . . . . . | 257 | 5 | — | — | — | — | 5 | — | 16 | 16 | 140 | 80 |
| Murphy Oil Co. Ltd. (A) . . . . . . . . . . | 240 | 2 | — | — | — | 150 | 90 | — | — | — | — | — |
| Petro Canada Exploration, Inc. (A) | 352 | 5 | — | — | — | — | 10 | — | 29 | 39 | 107 | 163 |
| Petrofina Canada, Inc. (A) . . . . . . | 932 | 5 | — | 129 | 87 | 403 | 302 | 11 | — | — | — | — |
| Shell Canada Ltd. . . . . . . . . . . . . | 3,628 | 9 | — | 125 | 134 | 911 | 1,269 | 30 | 304 | 210 | 301 | 344 |
| Spur Oil Ltd. (A) . . . . . . . . . . . . . . . | 138 | 2 | — | — | — | 130 | 8 | — | — | — | — | — |
| Sunoco, Inc. . . . . . . . . . . . . . . . . . . | 870 | 2 | — | — | — | 336 | 534 | — | — | — | — | — |
| Texaco Canada Ltd. . . . . . . . . . . . | 2,913 | 10 | 41 | 137 | 150 | 785 | 1,082 | 28 | 120 | 139 | 216 | 215 |
| Turbo Resources Ltd. . . . . . . . . . . | 304 | 5 | — | — | — | — | 81 | — | 15 | 44 | 112 | 29 |
| Top-Valu Gasmarts . . . . . . . . . . . . | 120 | 2 | — | — | — | 28 | 92 | — | — | — | — | — |
| Ultramar Canada, Inc. . . . . . . . . . . | 842 | 3 | 185 | — | — | 420 | 237 | — | — | — | — | — |

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(A) Most recent information available; company did not respond to 1982 questionnaire.
(B) Irving refused to provide any operational details.
Source: NPN Questionnaires

# Canadian Statistics

## Canadian Motor Vehicle Registrations 1980

| Province | Passenger Cars | Trucks | Buses | Motorcycles | Others (a) | Total Vehicles | Trailers |
|---|---|---|---|---|---|---|---|
| Newfoundland | 146,821 | 60,512 | NA | 4,856 | NA | 212,198 | 23,649 |
| Prince Edward Island | 47,608 | 18,992 | 433 | 1,644 | 73 | 68,750 | 6,968 |
| Nova Scotia | 364,416 | 144,476 | 1,351 | 18,649 | 1,126 | 530,018 | 53,519 |
| New Brunswick | 252,915 | 89,864 | 1,557 | 11,315 | 8,585 | 364,236 | 55,476 |
| Quebec | 2,547,500 | 396,406 | 16,103 | 128,670 | 98,754 | 3,187,433 | 399,585 |
| Ontario | 3,708,694 | 812,890 | 20,620 | 98,475 | 7,141 | 4,647,820 | 520,602 |
| Manitoba | 458,457 | 180,147 | 358 | 16,678 | 795 | 656,435 | 97,079 |
| Saskatchewan | 393,205 | 273,146 | 4,731 | 11,754 | 1,119 | 683,955 | 85,301 |
| Alberta | 1,141,901 | 457,011 | 7,304 | 52,863 | NA | 1,659,079 | 232,745 |
| British Columbia | 1,181,147 | 449,210 | NA | 42,218 | NA | 1,672,575 | 207,807 |
| Yukon | 6,778 | 10,975 | NA | 580 | NA | 18,333 | 4,080 |
| Northwest Territories | 6,069 | 9,092 | 112 | 978 | 69 | 16,320 | 2,540 |
| **Total** | **10,255,511** | **2,902,730** | **52,569** | **388,680** | **117,662** | **13,717,152** | **1,689,351** |

---

(a) Includes Mopeds
Source: Canadian Statistics, 1982

## New Motor Vehicle Sales

| Year | Passenger Cars | Trucks & Buses | Total |
|---|---|---|---|
| 1981 | 904,195 | 286,687 | 1,190,882 |
| 1980 | 932,060 | 331,747 | 1,267,807 |
| 1979 | 1,003,008 | 393,394 | 1,396,402 |
| 1978 | 988,890 | 377,645 | 1,366,544 |
| 1977 | 991,398 | 353,561 | 1,344,959 |
| 1976 | 946,488 | 344,975 | 1,291,463 |
| 1975 | 989,280 | 327,349 | 1,316,629 |

---

Source: Statistics Canada

## Automobiles Per Household (1981)

| Province | Households (Add 000)<br>1 Car | 2 Cars | 3 or More | Without |
|---|---|---|---|---|
| Newfoundland | 84 | 19 | 5 | 42 |
| Prince Edward Island | 20 | 7 | — | 6 |
| Nova Scotia | 136 | 48 | 10 | 65 |
| New Brunswick | 117 | 42 | 8 | 42 |
| Quebec | 1,219 | 344 | 54 | 500 |
| Ontario | 1,580 | 705 | 147 | 555 |
| Manitoba | 181 | 69 | 18 | 80 |
| Saskatchewan | 176 | 76 | 23 | 51 |
| Alberta | 340 | 192 | 54 | 112 |
| British Columbia | 470 | 244 | 55 | 169 |
| **Total** | **4,322** | **1,745** | **376** | **1,620** |

---

Source: Statistics Canada

## Drivers Licenses 1980

| | |
|---|---|
| Newfoundland | 257,000 (a) |
| Prince Edward Island | 28,949 |
| Nova Scotia | 468,160 |
| New Brunswick | 364,041 |
| Quebec | 164,868 |
| Ontario | 993,531 |
| Manitoba | 564,657 |
| Saskatchewan | 603,115 |
| Alberta | 1,500,361 |
| British Columbia | 1,900,000 (a) |
| Yukon | 16,058 |
| Northwest Territories | 16,022 |
| **Total** | **13,876,762** |

---

(a) Estimates
Source: Statistics Canada

## Factory Sales of Car Batteries

| | 1981 | 1980 |
|---|---|---|
| Original Equipment | 846,253 | NA |
| Replacement | 2,764,319 | NA |

---

Source: Statistics Canada

## Factory Shipments of Tires (a)

| | 1979 | | 1978 | |
|---|---|---|---|---|
| | Units | Dollar Value (Add 000) | Units | Dollar Value (Add 000) |
| Passenger Cars, Belted Bias | 5,509,920 | $129,750 | | |
| Passenger Cars, n.e.s. (b) | 2,544,952 | 59,030 | *All 1978 data are confidential except tractor/implements (c)* | |
| Light Trucks, n.e.s. (b) | 1,896,221 | 78,987 | | |
| Buses & Heavy Trucks | 960,840 | 109,498 | | |
| Farm Tractors/ Implements | 600,874 | 52,674 | | |
| Off-Highway n.e.s. (b) | 113,103 | 66,102 | | |
| **Total** | **11,625,910** | **$417,054** | | |

---

(a) Most recent information available: (b) Not elsewhere specified; (c) All 1978 data are confidential except tractors/implements which had 833,570 units and a value of $101,695,000.
Source: Statistics Canada

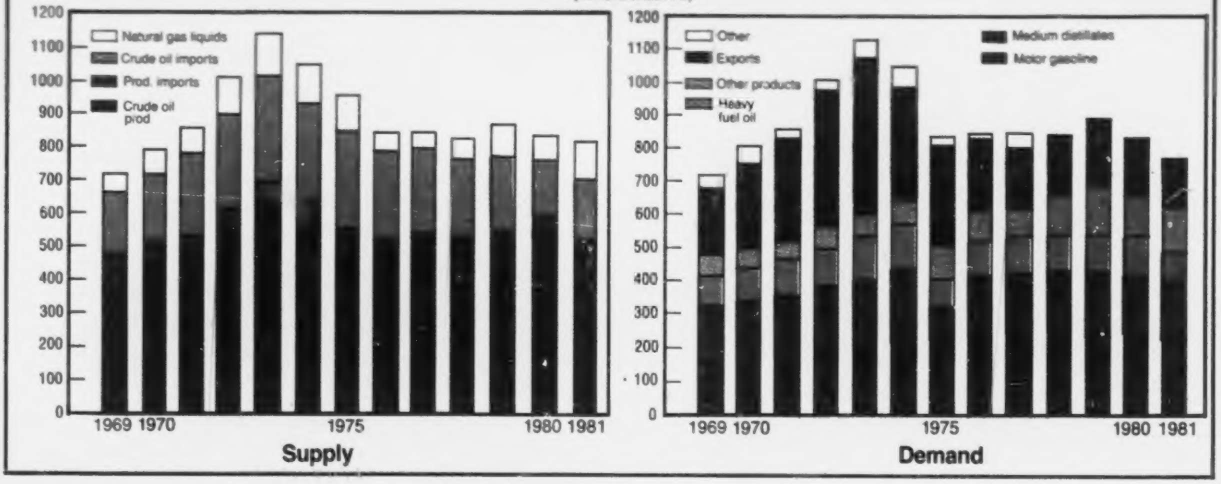
## Principal Heating Fuel (1981)

| Province | Households (Add 000)<br>Oil | Piped Gas | Bottled Gas | Electricity | Coal Coke | Wood | Total Households |
|---|---|---|---|---|---|---|---|
| Newfoundland | 72 | (a) | (a) | 41 | (a) | 18 | 132 |
| Prince Edward Island | 24 | (a) | (a) | (a) | (a) | 5 | 30 |
| Nova Scotia | 157 | (a) | (a) | 14 | (a) | 24 | 201 |
| New Brunswick | 100 | (a) | (a) | 37 | (a) | 25 | 162 |
| Quebec | 520 | 26 | (a) | 438 | (a) | 50 | 1,037 |
| Ontario | 760 | 1,052 | 14 | 227 | (a) | 55 | 2,112 |
| Manitoba | 47 | 165 | (a) | 40 | (a) | 6 | 260 |
| Saskatchewan | 54 | 200 | 9 | 9 | (a) | (a) | 276 |
| Alberta | 14 | 504 | 15 | (a) | (a) | (a) | 541 |
| British Columbia | 171 | 372 | 6 | 104 | (a) | 29 | 682 |
| **Total** | **1,917** | **2,320** | **51** | **912** | **12** | **216** | **5,434** |

---

(a) designates amount too small to be measured.
Source: Statistics Canada

Petroleum Supply-Demand in Canada
(millions of barrels)



# Refined Product Sales in 1981

**Refined product sales** in Canada totaled 770.6-million bbl. in 1981, down 7.8% from the 1980 total of 835.9-million bbl. Principal demand figures (see chart above) were: gasoline, 234.2-million bbl.; middle distillates, 172.8-million bbl.; heavy oil, 91.7-million bbl.; other products, 132.2-million bbl.; and exports, 139.6-million bbl. Principal supply figures were crude production, 505.5-million bbl.; product imports, 15.8-million bbl.; crude oil imports, 185.9-million bbl.; and natural gas liquids, 100.9-million bbl. Pentanes amounted to 36.5-million bbl., but are not included in the natural gas liquids total.

(Cubic Meters) (a)

| | Aviation Gasoline | Motor Gasoline | Aviation Turbine Fuel | Kerosene Stove Fuel | Diesel Fuel Oil | Light Fuel Oil | Heavy Fuel Oil | Lubes & Greases |
|---|---|---|---|---|---|---|---|---|
| Newfoundland | 4,848 | 615,518 | 214,840 | 73,770 | 426,423 | 370,905 | 372,824 | 14,672 |
| Prince Edward Island | 1,686 | 178,548 | 7,355 | 18,662 | 52,722 | 132,182 | 31,116 | 2,478 |
| Nova Scotia | 1,187 | 1,216,101 | 146,542 | 93,716 | 594,531 | 871,294 | 1,553,952 | 27,095 |
| New Brunswick | 3,987 | 1,080,913 | 53,543 | 66,382 | 368,611 | 608,709 | 1,663,922 | 21,590 |
| Québec | 30,530 | 8,164,588 | 819,463 | 298,666 | 2,670,147 | 4,392,632 | 5,732,556 | 176,372 |
| Ontario | 48,258 | 12,874,526 | 1,309,185 | 207,292 | 3,380,535 | 3,910,972 | 4,112,995 | 421,565 |
| Manitoba | 24,583 | 1,542,634 | 239,952 | 94,632 | 765,613 | 120,705 | 121,425 | 34,387 |
| Saskatchewan | 16,202 | 2,000,207 | 100,215 | 120,404 | 1,050,464 | 164,257 | 16,045 | 52,102 |
| Alberta | 33,352 | 5,081,385 | 777,186 | 59,263 | 2,810,692 | 89,753 | 23,453 | 170,086 |
| British Columbia | 41,001 | 4,381,154 | 677,774 | 105,112 | 2,391,020 | 630,857 | 1,974,055 | 110,785 |
| Yukon | 4,864 | 53,685 | 8,626 | 34,310 | 38,073 | 63,468 | 43 | 1,903 |
| Northwest Territories | 11,349 | 41,316 | 111,068 | 46,882 | 191,014 | 58,626 | 18,905 | 1,741 |
| **Total 1981** | **221,847** | **37,230,575** | **4,464,748** | **1,219,091** | **14,739,845** | **11,414,360** | **15,621,291** | **1,034,776** |
| **Total 1980** | **238,188** | **38,474,789** | **4,575,240** | **1,545,616** | **14,977,362** | **13,815,999** | **17,999,947** | **1,061,504** |

---

(a) To translate into imperial bbl., divide cubic meters in each case by 158.9; an imperial bbl. equals 35 imperial gal.; an imperial gal. equals 1.2 U.S. gal.
Source: Statistics Canada.

# Gasoline Sales and Premium Ratios

| | | (1977)* | |
|---|---|---|---|
| | | (Add 000) | |
| Metropolitan Areas | Outlets | Gasoline Sales (gal.) | Population (a) |
| Montreal | 1,575 | 659,744 | 2,798 |
| Toronto/Hamilton | 1,549 | 709,342 | 2,741 |
| Regina | 82 | 50,965 | 520 |
| Calgary | 226 | 156,591 | 151 |
| Ottawa/Hull | 297 | 169,241 | 444 |
| Winnipeg | 251 | 146,793 | 626 |
| Edmonton | 234 | 171,545 | 570 |
| Vancouver | 447 | 283,725 | 529 |
| **Total** | **4,660** | **2,347,946** | **9,516** |

---

*No survey was made in 1978, 1979, 1980 or 1981; these are the most recent figures available.
(a) As of June 1974, most recent data available.
Source: Statistics Canada.

| | Premium* | |
|---|---|---|
| Province | December 1981 | December 1980 |
| Alberta and Northwest Territories | 7.1% | 11.5% |
| British Columbia and Yukon | 10.3 | 11.0 |
| Manitoba | 4.0 | 4.6 |
| Maritimes | 10.4 | 12.1 |
| Newfoundland | 6.8 | 8.9 |
| Ontario | 12.5 | 14.3 |
| Quebec | 18.8 | 25.3 |
| Saskatchewan | 3.2 | 3.8 |
| **Total** | **11.9%** | **15.1%** |

---

*Contains leaded and unleaded premium.
Source: Ethyl Corp., Petroleum Chemicals Div.

# LP-Gas Outlook Brightens

**Total sales of LP-Gas** in 1981 were about the same as those in 1980 but most industry sources expressed belief that the outlook has changed considerably since the decontrol of the light products in January a year ago.

Department of Energy changed its formula and format for gathering LP-G data in 1979 and 1980 so industry experts were wary about providing estimates on 1981 sales until later in the year. Propane sales were especially encouraging, they agreed, due to the new conversion trends.

## LPG Sales Trend

### Major Domestic Markets (Add 000,000 gal.)

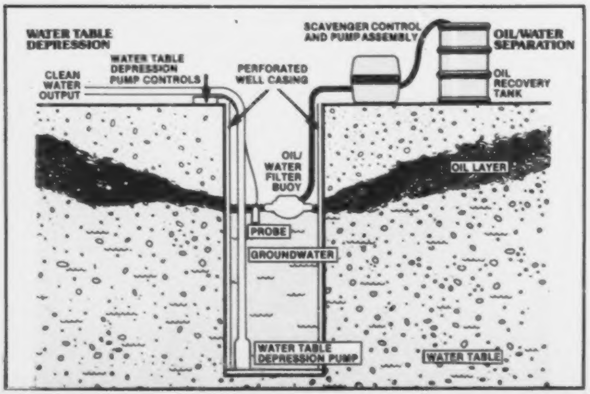
| | Total U.S. sales | | Residential-commercial | | Chemical | | Internal combustion | | Industrial | | All other uses | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Vol. | % Change | Vol. | % Change | Vol. | % Change | Vol. | % Change | Vol. | % Change | Vol. | % Change |
| 1980 (a) | 18,604 | −3.1 | 4,373 | −8.2 | 7,808 | −4.3 | 508 | 14.4 | 2,217 | 5.3 | 3,698 | −1.0 |
| 1979 (a) | 19,202 | 27.8 | 4,764 | −31.5 | 8,160 | 129.0 | 444 | −55.3 | 2,105 | 57.1 | 3,728 | 71.6 |
| 1978 | 15,023 | −3.1 | 6,954 | −3.0 | 3,563 | −0.4 | 993 | −13.3 | 1,340 | 28.4 | 2,172 | −15.6 |
| 1977 | 15,508 | −3.2 | 7,169 | −2.0 | 3,578 | −12.4 | 1,145 | −2.1 | 1,044 | — | 2,573 | 7.5 |
| 1976 | 16,013 | 5.3 | 7,313 | 4.2 | 4,085 | −2.1 | 1,170 | — | 1,052 | −2.8 | 2,394 | 35.8 |
| 1975 | 15,200 | −6.8 | 7,020 | −2.9 | 4,172 | −23.0 | 1,162 | −11.3 | 1,082 | 1.2 | 1,763 | 38.3 |
| 1974 | 16,306 | −5.0 | 7,231 | −7.8 | 5,422 | −9.0 | 1,310 | −7.0 | 1,069 | 2.4 | 1,275 | 46.2 |
| 1973 | 17,812 | −1.1 | 7,846 | −5.0 | 5,960 | 1.0 | 1,409 | −4.7 | 1,095 | −2.3 | 872 | 41.1 |
| 1972 | 17,373 | 12.1 | 8,253 | 7.6 | 5,898 | 15.1 | 1,479 | 11.7 | 1,124 | 23.7 | 618 | 30.7 |
| 1971 | 15,498 | 1.5 | 7,668 | 1.3 | 5,124 | 2.4 | 1,324 | — | 909 | 1.3 | 473 | 1.3 |
| 1970 | 15,271 | 26.6 | 7,569 | 41.6 | 5,003 | 24.8 | 1,336 | 11.9 | 897 | 32.1 | 467 | 125.6 |
| 1965 | 11,434 | 33.7 | 5,346 | 26.5 | 4,008 | 54.6 | 1,194 | 33.0 | 679 | 13.9 | 207 | −23.0 |
| 1960 | 8,579 | 40.1 | 4,225 | 50.8 | 2,593 | 36.5 | 898 | 37.7 | 596 | 13.7 | 269 | 9.3 |
| 1955 | 6,123 | 75.8 | 2,801 | 38.5 | 1,899 | 122.6 | 652 | 401.5 | 524 | 241.6 | 246 | −7.7 |
| 1950 | 3,433 | — | 2,022 | — | 853 | — | 130 | — | 217 | — | 260 | — |

---

(a) This data has been revised by DOE and is not comparable to the data appearing in pre-1979 data appearing above.

Source: Department of Energy, Energy Information Administration, Sales of LPG and Ethane in 1980, issued December, 1981.

**A Safe, Effective Way to Remove Flammable Petroleum Products from Groundwater**



Gasoline and oil leaks into groundwater are potentially dangerous. When petroleum reaches groundwater, it moves laterally at varying speeds. A single 1/8" stream becomes almost 100,000 gallons a year. That's a substantial unseen fire hazard.

This material can be safely and effectively removed with the Scavenger System. The Scavenger is a portable oil/water separator that features a unique filter cartridge — it repels water but allows oil to pass through and be recovered. The Water Table Depression Pump is a submersible pump with a probe that automatically pumps only water from the well, to aid in the recovery.

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SYSTEMS, INC.
Greenville, NH
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**Needham, Mass. 02194**

# Sales of Liquefied Petroleum Gases, by Use (a)

| | Residential and Commercial | | Internal Combustion Engine Fuel | | Industrial | | Total (b) | |
|---|---|---|---|---|---|---|---|---|
| **P.A.D. District and State** | **1980** | **1979** | **1980** | **1979** | **1980** | **1979** | **1980** | **1979** |
| **District I** | | | | | | | | |
| Connecticut | 29,421 | 27,012 | 1,628 | 1,432 | W | W | 51,909 | 48,575 |
| Delaware | 18,514 | W | 1,532 | 1,018 | 5,137 | W | 110,647 | 235,552 |
| Florida | 219,085 | 217,978 | 17,775 | 11,687 | 42,120 | 36,634 | 370,742 | 286,783 |
| Georgia | W | W | 8,376 | 10,489 | 20,827 | W | 257,479 | 253,650 |
| Maine | 19,535 | 45,797 | 1,013 | R 543 | 6,857 | 7,404 | 30,227 | W |
| Maryland and District of Columbia | W | W | 2,928 | 2,338 | W | 12,889 | 71,405 | 67,864 |
| Massachusetts | 33,349 | 31,893 | 2,918 | 3,037 | 8,420 | 6,785 | 73,515 | 73,829 |
| New Hampshire | 29,072 | 27,640 | W | W | 6,441 | 6,262 | 44,278 | 45,571 |
| New Jersey | 38,391 | 39,410 | W | W | W | W | 255,369 | 261,503 |
| New York | W | W | 8,706 | 9,039 | W | W | 194,784 | 187,154 |
| North Carolina | 140,625 | 131,619 | 5,564 | 5,769 | 24,856 | 25,500 | 276,006 | 260,181 |
| Pennsylvania | W | W | 16,272 | 13,455 | 120,447 | 140,479 | 250,951 | 281,271 |
| Rhode Island | 5,672 | 5,405 | 982 | 958 | 2,349 | 2,397 | 10,146 | 10,472 |
| South Carolina | 74,608 | 71,828 | 3,676 | 4,018 | 7,695 | 5,941 | W | W |
| Vermont | 17,590 | 15,993 | 256 | 188 | 2,284 | 1,174 | W | W |
| Virginia | 74,421 | 67,261 | 5,218 | 6,904 | W | 16,270 | W | W |
| West Virginia | 19,540 | 20,625 | 1,566 | 1,590 | W | W | 118,809 | 103,053 |
| **Total** | **1,134,575** | **1,150,334** | **90,941** | **83,661** | **423,120** | **425,258** | **2,357,531** | **2,401,724** |
| **District 2** | | | | | | | | |
| Illinois | 200,178 | 254,528 | 19,648 | 20,419 | W | W | 1,342,506 | 1,711,367 |
| Indiana | 165,596 | 192,050 | 9,689 | 10,528 | 17,671 | 24,400 | 275,369 | 313,117 |
| Iowa | 192,202 | 249,014 | 3,791 | 3,040 | W | 24,391 | 386,291 | 485,359 |
| Kansas | 102,908 | 121,617 | 12,201 | 12,954 | 23,905 | W | 290,718 | 325,936 |
| Kentucky | 101,919 | 114,424 | W | W | 101,525 | 14,420 | 353,619 | 355,637 |
| Michigan | 166,749 | 169,213 | 14,181 | 17,497 | W | 24,340 | 232,994 | 248,343 |
| Minnesota | 144,727 | 160,605 | 7,466 | 5,280 | W | W | 266,239 | 281,219 |
| Missouri | W | 348,873 | 7,483 | 6,355 | 12,795 | 20,497 | 315,519 | 447,728 |
| Nebraska | W | W | W | W | W | 10,728 | 155,631 | 154,733 |
| North Dakota | 25,238 | 38,134 | 1,272 | 525 | 5,271 | 643 | 45,046 | 56,551 |
| Ohio | 126,312 | 157,307 | 24,901 | 18,256 | 225,509 | 248,030 | 1,531,116 | 1,541,193 |
| Oklahoma | 86,909 | 93,249 | 26,007 | 12,953 | 12,823 | W | 310,884 | 278,829 |
| South Dakota | 57,584 | 54,097 | 7,614 | 4,721 | 931 | 1,589 | 87,508 | 81,060 |
| Tennessee | W | W | 6,702 | 8,061 | 10,834 | W | 96,391 | 99,416 |
| Wisconsin | 147,380 | 151,398 | 9,249 | 10,381 | W | W | 208,808 | 227,636 |
| **Total** | **1,907,925** | **2,253,147** | **170,494** | **146,830** | **556,133** | **583,591** | **5,898,639** | **6,608,124** |
| **District 3** | | | | | | | | |
| Alabama | W | W | 5,136 | W | 8,975 | W | 171,182 | 190,234 |
| Arkansas | W | W | W | W | 15,676 | 10,627 | 167,662 | 166,570 |
| Louisiana | 56,691 | 63,054 | W | W | 248,799 | 296,193 | 1,828,889 | 2,126,320 |
| Mississippi | 108,753 | 111,841 | 16,819 | W | 24,338 | 8,244 | 196,949 | 197,379 |
| New Mexico | 59,728 | 62,111 | W | W | 7,072 | 6,133 | 162,936 | 148,598 |
| Texas | 302,961 | 302,928 | W | 61,258 | 716,696 | W | 6,565,445 | 6,022,586 |
| **Total** | **761,890** | **795,725** | **136,983** | **114,914** | **1,021,556** | **888,951** | **9,093,063** | **8,851,687** |
| **District 4** | | | | | | | | |
| Colorado | W | W | W | W | 15,245 | 14,375 | 133,872 | 129,048 |
| Idaho | 15,612 | 18,316 | 2,572 | 2,211 | 4,283 | 4,023 | 34,365 | 37,728 |
| Montana | 40,948 | 29,923 | 5,015 | 1,394 | W | W | 62,488 | 36,150 |
| Utah | 17,241 | 15,781 | 1,599 | 788 | W | W | 44,998 | 54,805 |
| Wyoming | 31,818 | 33,713 | 8,095 | 5,179 | 5,328 | 3,996 | 70,215 | 68,341 |
| **Total** | **W** | **W** | **W** | **W** | **32,031** | **28,376** | **345,938** | **326,072** |
| **District 5** | | | | | | | | |
| Alaska | W | W | W | W | W | W | 6,602 | 6,359 |
| Arizona | 32,443 | W | 8,630 | W | W | W | 54,967 | 57,482 |
| California | 243,074 | 246,914 | 57,711 | W | 148,801 | W | 664,045 | 765,030 |
| Hawaii | W | W | W | W | W | W | 54,400 | 52,327 |
| Nevada | 21,104 | 19,852 | W | W | 2,176 | 1,572 | 30,446 | 28,101 |
| Oregon | 28,339 | 30,059 | 7,158 | 7,531 | W | 2,427 | 46,821 | 48,434 |
| Washington | 30,952 | 28,004 | 10,135 | 9,158 | W | W | 51,430 | 50,302 |
| **Total** | **W** | **W** | **87,294** | **84,926** | **184,569** | **179,210** | **908,711** | **1,008,035** |
| **U.S. Total** | **4,372,576** | **4,764,402** | **508,011** | **443,732** | **2,217,409** | **2,105,386** | **18,603,882** | **19,201,642** |

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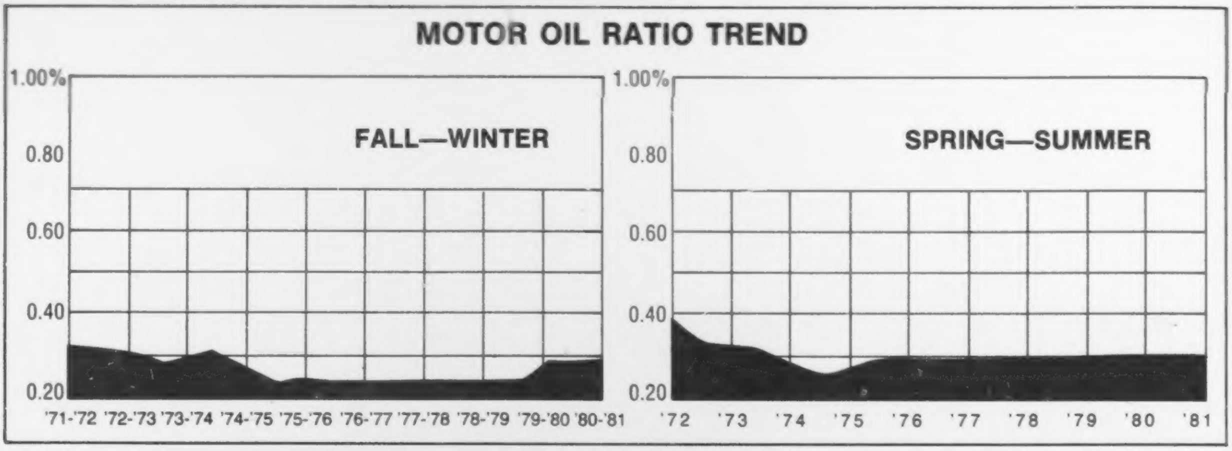
(a) Excludes use in gasoline production; (b) Total includes gas utility, chemical and miscellaneous uses; (w) Data withheld by DOE to avoid disclosing individual company data. These data are included in totals.

Source: Department of Energy, Sales of Liquefied Petroleum Gases and Ethane in 1980, released December, 1981.



# Motor Oil Ratios Vary Slightly

**The service-station motor-oil** ratio in the spring-summer period of 1981 stabilized after moving upward slightly in the preceding seasonal period. The fall-winter ratio also showed little movement, according to NPN's annual survey.

The figures reflect service-station sales only, and do not express total market sales. The survey indicates the number of gallons of motor oil sold at stations per 100 gal. of gasoline. Put another way, a ratio of 0.24, for example, is equivalent to 1 gal. of motor oil for every 416.9 gal. of gasoline.

The latest survey figures are based on confidential reports from key companies marketing motor oil—not on total market sales. Ratios for each are weighted by gasoline volume.

## Motor-Oil Ratios for Service Stations

| Season | United States |
|---|---|
| Spring-summer 1981 | 0.25 |
| Fall-winter 1980-81 | 0.25 |
| Spring-summer 1980 | 0.24 |
| Fall-winter 1979-80 | 0.26 |
| Spring-summer 1979 | 0.25 |
| Fall-winter 1978-79 | 0.24 |
| Spring-summer 1978 | 0.30 |
| Fall-winter 1977-78 | 0.26 |
| Spring-summer 1977 | 0.30 |
| Fall-winter 1976-77 | 0.28 |
| Spring-summer 1976 | 0.30 |
| Fall-winter 1975-76 | 0.25 |
| Spring-summer 1975 | 0.30 |
| Fall-winter 1974-75 | 0.26 |
| Spring-summer 1974 | 0.29 |
| Fall-winter 1973-74 | 0.32 |

---

The fall-winter season covers the period Oct. 1-March 31. Spring-summer covers the period April 1-Sept. 30.

## Over-All and Station-Only Ratios (a)

| Season | Over-all | Station Only |
|---|---|---|
| Spring-summer 1981 | 0.24 | 0.28 |
| Fall-winter 1980-81 | 0.24 | 0.28 |
| Spring-summer 1980 | 0.24 | 0.28 |
| Fall-winter 1979-80 | 0.24 | 0.24 |
| Spring-summer 1979 | 0.29 | 0.24 |
| Fall-winter 1978-79 | 0.28 | 0.23 |
| Spring-summer 1978 | 0.32 | 0.29 |
| Fall-winter 1977-78 | 0.31 | 0.26 |
| Spring-summer 1977 | 0.31 | 0.31 |
| Fall-winter 1976-77 | 0.32 | 0.30 |
| Spring-summer 1976 | 0.30 | 0.25 |
| Fall-winter 1975-76 | 0.30 | 0.25 |
| Spring-summer 1975 | 0.30 | 0.29 |
| Fall-winter 1974-75 | 0.31 | 0.26 |
| Spring-summer 1974 | 0.33 | 0.29 |
| Fall-winter 1973-74 | 0.38 | 0.33 |

---

(a) Station-only ratios in this table include only companies also reported ratios through all retail outlets, such as stations, garages, car dealers, chain stores.

## Service-Station Sales Projection

| Season | Avg. qt. per car service-station sales | Avg. mi. per car per season | Avg. gal. 'gas' per car per season | Avg. qt. refill per car-station sales | Avg. qt makeup per car-station sales | Avg. no. per car station oil chgs. | Avg. mi. interval station sale of oil chg. | Gal. gasoline sold per gal. oil |
|---|---|---|---|---|---|---|---|---|
| Spring-summer 1981 | | | | | | | | |
| Fall-winter 1980-81 | | | | | | | | |
| Spring-summer 1980 | 3.42 | 5,329 | 357.3 | 2.39 | 1.03 | 0.53 | 10,155 | 416.9 |
| Fall-winter 1979-80 | 3.04 | 4,398 | 293.2 | 2.13 | 0.91 | 0.45 | 9,817 | 384.8 |
| Spring-summer 1979 | 3.09 | 5,602 | 309.0 | 2.16 | 0.93 | 0.45 | 12,339 | 400.2 |
| Fall-winter 1978-79 | 3.06 | 4,584 | 318.3 | 2.14 | 0.92 | 0.45 | 10,187 | 416.6 |
| Spring-summer 1978 | 4.48 | 5,491 | 373.5 | 3.13 | 1.35 | 0.66 | 8,345 | 333.4 |
| Fall-winter 1977-78 | 3.17 | 4,493 | 305.6 | 2.22 | 0.95 | 0.47 | 9,620 | 396.5 |
| Spring-summer 1977 | 4.22 | 5,563 | 352.0 | 2.95 | 1.27 | 0.62 | 8,958 | 333.3 |
| Fall-winter 1976-77 | 3.27 | 4,551 | 291.7 | 2.29 | 0.98 | 0.48 | 9,441 | 357.0 |
| Spring-summer 1976 | 4.57 | 5,225 | 381.4 | 3.20 | 1.37 | 0.67 | 7,786 | 342.1 |
| Fall-winter 1975-76 | 3.12 | 4,275 | 312.0 | 2.18 | 0.94 | 0.46 | 9,334 | 400.0 |
| Spring-summer 1975 | 4.66 | 5,170 | 388.7 | 3.26 | 1.40 | 0.69 | 7,536 | 334.4 |
| Fall-winter 1974-75 | 3.32 | 4,230 | 320.4 | 2.33 | 0.90 | 0.49 | 8,633 | 384.6 |
| Spring-summer 1974 | 4.72 | 5,601 | 408.8 | 3.30 | 1.42 | 0.69 | 8,071 | 346.4 |
| Fall-winter 1973-74 | 4.32 | 4,583 | 339.5 | 3.02 | 1.30 | 0.63 | 7,206 | 313.9 |
| Spring-summer 1981 | 3.84 | 5,024 | 331.6 | 2.69 | 1.15 | 0.57 | 8,814 | 334.6 |
| Fall-winter 1980-81 | 2.93 | 4,111 | 271.2 | 2.05 | 0.88 | 0.43 | 9,560 | 370.1 |

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Data reflect average selling patterns in service stations only, as projected from service-station oil-ratio data. Data do not reflect consumer-buying pattern. Source: NPN questionnaires.

# Lube Oil Sales Projections

## U.S. Demand for Automotive Lube Base Oils

| | (Add 000,000) | | | | |
|---|---|---|---|---|---|
| Year | Engine Oils | Hydraulic Fluids | Other Lubes | Total (gal.) | Total (bbl.) |
| 1990 | 913 | 226 | 54 | 1,193 | 28.4 |
| 1985 | 928 | 214 | 52 | 1,194 | 28.4 |
| 1981 | 896 | 187 | 48 | 1,131 | 26.9 |
| 1980 | 912 | 190 | 47 | 1,149 | 27.4 |
| 1979 | 1,032 | 224 | 54 | 1,310 | 31.2 |
| 1978 | 981 | 220 | 52 | 1,253 | 29.8 |
| 1977 | 906 | 205 | 90 | 1,201 | 28.6 |
| 1976 | 884 | 200 | 88 | 1,172 | 27.9 |

Source: James L. Helm, Sun Refining and Marketing Co., in projection prepared for the Association of Petroleum Re-Refiners October, 1981 with adjustments to 1981 to reflect actuals.

## U.S. Demand for Lubricating Base Oils

| | (Add 000,000) | | | |
|---|---|---|---|---|
| Year | Total | Automotive Lubes | Industrial Lubes | Process Oils |
| 1990 | 60.3 | 28.4 | 21.2 | 10.7 |
| 1985 | 58.2 | 28.4 | 20.6 | 9.2 |
| 1981 | 52.8 | 26.9 | 18.2 | 7.7 |
| 1980 | 54.4 | 27.4 | 19.0 | 8.0 |
| 1979 | 61.4 | 31.2 | 21.4 | 8.8 |
| 1978 | 58.8 | 29.8 | 20.6 | 8.4 |
| 1977 | 57.1 | 28.6 | 21.1 | 7.4 |
| 1976 | 55.3 | 26.2 | 20.5 | 8.6 |

Source: James L. Helm, Sun Refining and Marketing Co., in projection prepared for the Association of Petroleum Re-Refiners October 1981 with adjustments to 1981 to reflect actuals.

## Projected Domestic Demand for Blended Lubricants

| | (Millions of gal.) | | | |
|---|---|---|---|---|
| **Automotive Lubes** | 1980 | 1981 | 1985 | 1990 |
| On-Road Engine Oil | 825 | 804 | 805 | 780 |
| Off-Road Engine Oil | 234 | 233 | 265 | 300 |
| Hydraulic Oil | 214 | 210 | 240 | 255 |
| Gear Oil | 52 | 53 | 57 | 60 |
| **Totals** | **1,325** | **1,300** | **1,367** | **1,395** |

| | (Millions of gal.) | | | |
|---|---|---|---|---|
| **Industrial Lubes** | 1980 | 1981 | 1985 | 1990 |
| General Lubes | 486 | 463 | 525 | 550 |
| Metalworking | 211 | 199 | 220 | 225 |
| Engine Oil | 150 | 139 | 160 | 170 |
| Process Oil | 332 | 338 | 388 | 450 |
| **Totals** | **1,179** | **1,139** | **1,293** | **1,395** |

Source: James L. Helm, Sun Refining and Marketing Co., projection prepared for the Association of Petroleum Re-Refiners October 1981 with adjustments to 1981 to reflect actuals.

## Automotive Sales

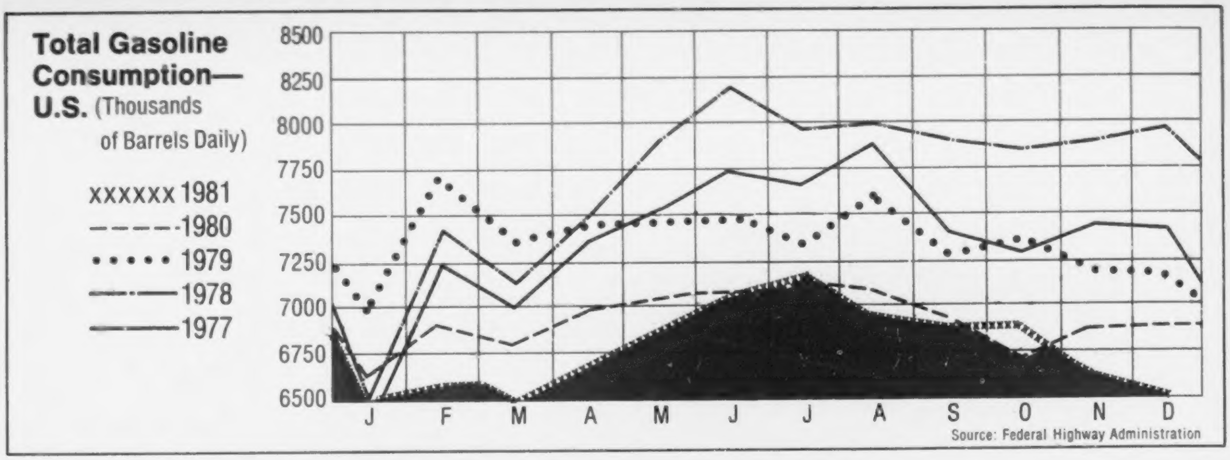
| | (Add 000 gal.) | |
|---|---|---|
| | 1980 | 1979 |
| SAE J-183a, Engine Oils | | |
| Monograded | 522,212 | 616,026 |
| Multi-graded | 479,560 | 484,570 |
| **Sub Total** | **1,001,772** | **1,100,596** |
| Non SAE J-183a, Engine Oils | | |
| Aircraft | 11,324 | 12,160 |
| Gasoline fueled two-stroke | 13,105 | 16,420 |
| **Sub Total** | **24,429** | **28,580** |
| Transmission and Hydraulic Fluids | | |
| Automatic Trans. Fluids | 133,473 | 141,784 |
| Universal Tractor Fluids | 41,916 | 43,653 |
| Shock Absorber/Steering Fluid | 7,750 | 10,635 |
| Other (Manual Trans., etc.) | 7,001 | 11,289 |
| **Sub Total** | **190,140** | **207,361** |
| Gear Lubricants | | |
| GL-4 Less | 5,983 | 8,721 |
| GL-5 and GL-6 | 42,892 | 46,160 |
| **Sub Total** | **48,875** | **54,881** |
| **Total Automotive Sales** | **1,265,216** | **1,391,418** |

## Industrial Sales

| | (Add 000 gal.) | |
|---|---|---|
| | 1980 | 1979 |
| General Industrial Lubricants | | |
| Hydraulic Oils | 214,055 | 231,832 |
| Gear Oils | 41,099 | 45,225 |
| Other Specified | 162,523 | 179,669 |
| Other Unspecified | 2,134 | 829 |
| **Sub Total** | **419,811** | **457,555** |
| Industrial Engine Oil | | |
| Railroad Diesel | 61,271 | 69,990 |
| Marine | 54,560 | 36,471 |
| Natural Gas | 41,209 | 39,923 |
| **Sub Total** | **157,040** | **146,384** |
| Metalworking | | |
| Specified | 86,973 | 103,517 |
| Unspecified | 3,828 | 1,648 |
| **Sub Total** | **90,801** | **105,165** |
| Process Oils | | |
| Specified | 284,780 | 334,420 |

| | (Add 000 gal.) | | |
|---|---|---|---|
| | 1980 | 1979 | 1978 |
| **Total Industrial Lube Sales** | **952,432** | **1,043,524** | **1,002,169** |
| **Total Automotive Lube Sales** | **1,265,216** | **1,391,418** | **1,385,184** |
| **GRAND TOTAL** | **2,217,648** | **2,434,942** | **2,387,353** |

Source for Table: James L. Helm, Sun Refining and Marketing Co. and the U.S. Lubricating Oil Sales Report, National Petroleum Refiners Assn.



**Total Gasoline Consumption—U.S.** (Thousands of Barrels Daily)

Source: Federal Highway Administration

# Gasoline Consumption by States

**(Includes consumption on highway, off-highway and other uses.)**

| | 1981 Rank | 1981 (a) (Add 000 gal.) | 1980 (b) (Add 000 gal.) | % Chng. '81 vs. '80 |
|---|---|---|---|---|
| Alabama | 23 | 1,849,225 | 1,961,902 | −5.7% |
| Alaska | 50 | 212,804 | 201,373 | 5.7 |
| Arizona | 28 | 1,344,438 | 1,328,722 | 1.2 |
| Arkansas | 33 | 1,137,999 | 1,178,800 | −3.5 |
| California | 1 | 10,842,862 | 10,992,050 | −1.4 |
| Colorado | 26 | 1,503,658 | 1,506,415 | −0.2 |
| Connecticut | 29 | 1,296,048 | 1,327,582 | −2.4 |
| Delaware | 48 | 290,581 | 293,851 | −1.1 |
| District of Columbia | 51 | 177,658 | 171,451 | 0.7 |
| Florida | 4 | 4,845,057 | 4,810,520 | 0.7 |
| Georgia | 11 | 2,809,969 | 2,874,923 | −2.3 |
| Hawaii | 47 | 347,848 | 354,529 | −1.9 |
| Idaho | 40 | 471,054 | 488,333 | −3.5 |
| Illinois | 6 | 4,598,012 | 4,816,780 | −4.5 |
| Indiana | 12 | 2,605,584 | 2,686,146 | −3.0 |
| Iowa | 27 | 1,474,733 | 1,561,192 | −5.5 |
| Kansas | 31 | 1,268,708 | 1,311,181 | −3.2 |
| Kentucky | 24 | 1,729,135 | 1,755,397 | −1.5 |
| Louisiana | 18 | 2,006,034 | 2,081,328 | −3.6 |
| Maine | 39 | 497,749 | 517,014 | −3.7 |
| Maryland | 21 | 1,914,423 | 1,941,209 | −1.1 |
| Massachusetts | 16 | 2,249,956 | 2,301,675 | −2.2 |
| Michigan | 8 | 4,014,363 | 4,274,036 | −6.1 |
| Minnesota | 19 | 1,984,982 | 2,045,270 | −2.9 |
| Mississippi | 32 | 1,208,384 | 1,194,845 | 1.1 |
| Missouri | 14 | 2,528,616 | 2,602,627 | −2.8 |
| Montana | 41 | 445,641 | 459,950 | −3.1 |
| Nebraska | 35 | 798,018 | 847,341 | −5.8 |
| Nevada | 38 | 508,535 | 500,286 | 1.6 |
| New Hampshire | 46 | 358,962 | 411,214 | −3.0 |
| New Jersey | 9 | 3,150,798 | 3,260,992 | −3.4 |
| New Mexico | 37 | 742,486 | 743,334 | −0.1 |
| New York | 3 | 5,674,946 | 5,668,563 | 0.1 |
| North Carolina | 10 | 2,874,700 | 2,932,274 | −2.0 |
| North Dakota | 43 | 408,449 | 407,250 | 0.3 |
| Ohio | 5 | 4,766,658 | 4,982,574 | −4.3 |
| Oklahoma | 20 | 1,922,403 | 1,845,259 | 4.2 |
| Oregon | 30 | 1,271,001 | 1,330,612 | −4.5 |
| Pennsylvania | 7 | 4,471,326 | 4,735,849 | −5.6 |
| Rhode Island | 45 | 368,524 | 381,826 | −3.5 |
| South Carolina | 25 | 1,529,196 | 1,562,400 | −2.1 |
| South Dakota | 42 | 411,024 | 423,517 | −2.9 |
| Tennessee | 15 | 2,388,466 | 2,417,939 | −1.2 |
| Texas | 2 | 8,149,406 | 8,106,499 | 0.5 |
| Utah | 36 | 768,450 | 734,992 | 4.6 |
| Vermont | 49 | 234,114 | 238,842 | −2.0 |
| Virginia | 13 | 2,530,673 | 2,599,199 | −2.6 |
| Washington | 22 | 1,872,364 | 1,882,513 | −0.5 |
| West Virginia | 34 | 804,632 | 845,242 | −4.8 |
| Wisconsin | 17 | 2,067,800 | 2,177,363 | −5.0 |
| Wyoming | 44 | 375,068 | 373,723 | 0.3 |
| **U.S. Total** | | **104,143,151** | **106,448,704** | **−2.2%** |

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Includes consumption on highway, off-highway and other uses.
(a) Preliminary; (b) Revised and final.

# . . . and by Types of Vehicles

| | Passenger Vehicles | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Buses | | | | | |
| | Cars and Motorcycles | Commercial | School | All Buses | Total Passenger | Trucks and Combinations | All Motor Vehicles |
| Fuel consumed (million gal.) | 73,735 (a) | 696,000 | 379,600 | 1,075,600 | 74,810,354 | 40,149,500 | 114,959,854 |
| Average per vehicle (gal.) | 579 (b) | 6,516 | 994 | 2,034 | 585 | 1,154 | 711 |
| Average miles per gal. | 15.32 (c) | 5.03 | 7.64 | 5.95 | 15.19 | 9.58 | 13.23 |
| Vehicles registered (thousands) | 127,488 (d) | 106.8 | 381.9 | 528.8 | 127,977 | 33,637 | 161,614 |
| Average miles travelled | 8,865 (e) | 32,765 | 7,592 | 12,103 | 8,879 | 11,433 | 9,410 |
| Vehicle miles travelled (millions): | | | | | | | |
| Main rural roads | 390,081 | 1,175 | 1,425 | 2,600 | 392,681 | 197,270 | 589,951 |
| Local rural roads | 69,125 | 90 | 610 | 700 | 69,825 | 13,950 | 83,775 |
| Urban streets | 670,681 | 2,235 | 865 | 3,100 | 673,781 | 173,350 | 847,131 |
| **Total travel 1980** | **1,129,887 (f)** | **3,500** | **2,900** | **6,400** | **1,136,287** | **384,570** | **1,520,857** |
| **Total travel 1979** | **1,162,528 (g)** | **3,125** | **2,980** | **6,105** | **1,168,663** | **360,500** | **1,529,133** |

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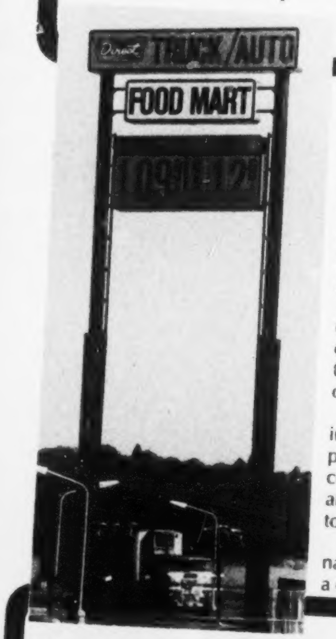
(a) 73,374,754,000 for passenger cars, 360,000,000 for motorcycles; (b) 603 for passenger cars, 63 for motorcycles; (c) 15.15 for passenger cars, 50.00 for motorcycles; (d) 121,723,650,000 for passenger cars, 5,724,602,000 for motorcycles; (e) 9,135 for passenger cars, 3,144 for motorcycles; (f) 1,111,887,000 for passenger cars, 18,000,000 for motorcycles; (g) 1,140,518,000 for passenger cars, 22,010,000 for motorcycles.

**Source: Federal Highway Administration, Table VM-1, October 1981.**

# State Gasoline Consumption by Rank

| | 1981 Rank | 1980 Rank | (Add 000 gal.) 1981 Total |
|---|---|---|---|
| California | 1 | 1 | 10,842,862 |
| Texas | 2 | 2 | 8,149,406 |
| New York | 3 | 3 | 5,674,346 |
| Florida | 4 | 5 | 4,845,057 |
| Ohio | 5 | 4 | 4,766,658 |
| Illinois | 6 | 6 | 4,598,012 |
| Pennsylvania | 7 | 7 | 4,471,326 |
| Michigan | 8 | 8 | 4,014,363 |
| New Jersey | 9 | 9 | 3,150,798 |
| North Carolina | 10 | 10 | 2,874,700 |
| Georgia | 11 | 11 | 2,809,969 |
| Indiana | 12 | 12 | 2,605,584 |
| Virginia | 13 | 14 | 2,530,673 |
| Missouri | 14 | 13 | 2,528,616 |
| Tennessee | 15 | 15 | 2,388,466 |
| Massachusetts | 16 | 16 | 2,249,956 |
| Wisconsin | 17 | 17 | 2,067,800 |
| Louisiana | 18 | 18 | 2,006,034 |
| Minnesota | 19 | 19 | 1,984,982 |
| Oklahoma | 20 | 23 | 1,922,403 |
| Maryland | 21 | 21 | 1,914,423 |
| Washington | 22 | 22 | 1,872,364 |
| Alabama | 23 | 20 | 1,849,225 |
| Kentucky | 24 | 24 | 1,729,135 |
| South Carolina | 25 | 26 | 1,529,196 |
| Colorado | 26 | 27 | 1,503,658 |
| Iowa | 27 | 25 | 1,474,733 |
| Arizona | 28 | 29 | 1,344,438 |
| Connecticut | 29 | 30 | 1,296,048 |
| Oregon | 30 | 28 | 1,271,001 |
| Kansas | 31 | 31 | 1,268,708 |
| Mississippi | 32 | 32 | 1,208,384 |
| Arkansas | 33 | 33 | 1,137,998 |
| West Virginia | 34 | 34 | 804,632 |
| Nebraska | 35 | 35 | 798,018 |
| Utah | 36 | 37 | 768,450 |
| New Mexico | 37 | 36 | 742,486 |
| Nevada | 38 | 39 | 508,535 |
| Maine | 39 | 38 | 497,794 |
| Idaho | 40 | 41 | 471,054 |
| Montana | 41 | 40 | 445,641 |
| South Dakota | 42 | 42 | 411,024 |
| North Dakota | 43 | 44 | 408,449 |
| Wyoming | 44 | 46 | 375,068 |
| Rhode Island | 45 | 45 | 368,504 |
| New Hampshire | 46 | 43 | 358,962 |
| Hawaii | 47 | 47 | 347,848 |
| Delaware | 48 | 48 | 290,581 |
| Vermont | 49 | 49 | 234,114 |
| Alaska | 50 | 50 | 212,804 |
| District of Columbia | 51 | 51 | 177,658 |

Source: Federal Highway Administration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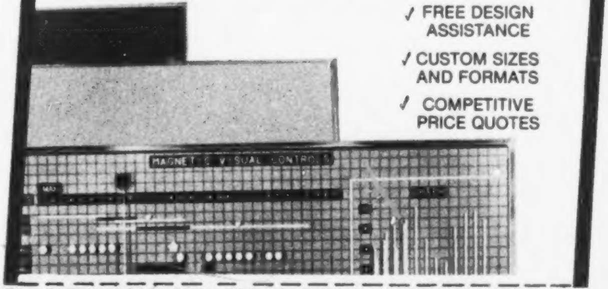
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# Gasoline Octanes, U.S. Service Stations

**The octane numbers** of leaded and unleaded gasolines were fairly stable in the fall-winter of 1980-81 and the summer of 1981, according to the latest evaluation report from the U.S. Department of Energy's Technology Center in Bartlesville, Okla. The 1981 study included a change that paralleled the introduction of above 90 and below 90 indexes for unleaded gasoline in 1980. The new concept is now applied to leaded gasoline with a below 93 index and an above 93 index. The data for the above 93 index were not available when the 1981 report was published.

| | | Regular grade (x) | | | Premium grade (x) | | | Unleaded grade | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | Season | Rsh. | Mtr. | (R + M)* / 2 | Rsh. | Mtr. | (R + M)* / 2 | Rsh. | Mtr. | (R + M)* / 2 |
| 1981 | Summer | 92.8(x) | 85.1(x) | 89.0(x) | — | — | — | 91.9(a)<br>96.3(b) | 83.0(a)<br>86.2(b) | 87.4(a)<br>91.3(b) |
| 1980-81 | Winter | 92.8 | 85.4 | 89.1 | 97.3 | 89.2 | 93.3 | 91.9(a)<br>96.1(b) | 83.3(a)<br>86.5(b) | 87.6(a)<br>91.4(b) |
| 1980 | Summer | 96.2 | 85.2 | 88.9 | 97.0 | 88.6 | 92.8 | 92.1(a)<br>96.1(b) | 83.4(a)<br>86.4(b) | 87.8(a)<br>91.6(b) |
| 1979-80 | Winter | 92.5 | 85.5 | 89.0 | 97.2 | 89.3 | 93.2 | 92.1(a)<br>97.1(b) | 83.7(a)<br>87.0(b) | 87.9(a)<br>92.1(b) |
| 1979 | Summer | 92.8 | 85.7 | 89.3 | 97.6 | 89.8 | 93.7 | 93.0 | 84.1 | 88.6 |
| 1978-79 | Winter | 93.2 | 85.9 | 89.6 | 98.0 | 90.3 | 94.2 | 93.1 | 84.3 | 88.7 |
| 1978 | Summer | 93.2 | 85.7 | 89.5 | 98.2 | 90.4 | 94.3 | 93.0 | 83.9 | 88.5 |
| 1977-78 | Winter | 93.2 | 85.7 | 89.5 | 98.8 | 91.0 | 94.9 | 92.9 | 83.9 | 88.4 |
| 1977 | Summer | 93.2 | 85.9 | 89.6 | 98.7 | 91.2 | 95.0 | 92.9 | 83.9 | 88.5 |
| 1976-77 | Winter | 93.2 | 86.1 | 89.7 | 98.8 | 91.4 | 95.1 | 92.6 | 84.1 | 88.4 |
| 1976 | Summer | 93.3 | 86.0 | 89.6 | 98.9 | 91.4 | 95.2 | 92.4 | 83.9 | 88.2 |
| 1975-76 | Winter | 93.4 | 86.0 | 89.7 | 98.9 | 91.4 | 95.2 | 92.3 | 84.0 | 88.2 |
| 1975 | Summer | 93.4 | 86.0 | 89.7 | 98.9 | 91.4 | 95.2 | 92.1 | 83.9 | 88.0 |
| 1974-75 | Winter | 93.4 | 86.1 | 89.9 | 98.9 | 91.6 | 95.3 | 92.3 | 84.0 | 88.2 |
| 1974 | Summer | 93.4 | 85.9 | 89.7 | 98.9 | 91.5 | 95.2 | | | |
| 1973-74 | Winter | 93.4 | 86.0 | 89.7 | 99.1 | 91.7 | 95.4 | | | |
| 1973 | Summer | 93.5 | 86.1 | 89.8 | 99.3 | 91.9 | 95.6 | | | |
| 1972-73 | Winter | 93.9 | 86.4 | 90.2 | 99.6 | 92.2 | 95.9 | | | |
| 1972 | Summer | 94.1 | 86.4 | 99.8 | 90.3 | 92.2 | 96.0 | | | |

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*Antiknock index.

(x) In 1981, DOE began two classifications for leaded gasoline—Below 93 octane and above 93 octane. The data on above 93 octane were not available when the latest study was completed.

(a) Unleaded antiknock (octane) index data below 90.

(b) Unleaded antiknock (octane) index data 90 and above.

Source: Motor Gasolines, Summer 1981, Bartlesville (Okla.) Energy Technology Center Department of Energy, May, 1982.

# Octane Numbers Dip Slightly

**Minor slippage** in the octane numbers of leaded and unleaded gasolines are shown in the winter 1980-81 and the summer 1981 evaluation reports published by the Department of Energy, Bartlesville, Okla., Technology Center. As noted above, the government introduced a new concept for leaded gasolines in 1981, a below 93 index and an above 93 index. Only the data for the below 93 index were available in May of this year, however. The government uses two methods to determine octane numbers—research and motor. These are combined and divided by two (R plus M divided by 2) to reach the number that is posted on service station pumps.

| | Unleaded Octane Number | | | | | | Leaded Octane Number (x) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Index Below 90 | | | Index Above 90 | | | Index Below 93 | | | Index Above 93 | | |
| | Rsch. | Mtr. | (R + M) / 2 | Rsch. | Mtr. | (R + M) / 2 | Rsch. | Mtr. | (R + M) / 2 | Rsch. | Mtr. | (R + M) / 2 |
| Northeast | 91.5 | 83.3 | 87.4 | NS | NS | NS | 94.0 | 84.7 | 89.4 | — | — | — |
| Mid-Atlantic Coast | 92.1 | 82.9 | 87.5 | 96.8 | 86.7 | 91.8 | 93.4 | 85.8 | 89.6 | — | — | — |
| Southeast | 91.7 | 82.6 | 87.1 | 97.1 | 86.7 | 91.9 | 93.2 | 85.4 | 89.3 | — | — | — |
| Appalachian | 91.8 | 83.2 | 87.5 | 95.5 | 86.4 | 91.0 | 93.0 | 85.7 | 89.4 | — | — | — |
| Michigan | 91.6 | 82.7 | 87.2 | 96.0 | 86.1 | 91.1 | 92.2 | 85.4 | 88.8 | — | — | — |
| North Illinois | 91.6 | 83.3 | 87.5 | 96.3 | 87.3 | 91.8 | 92.9 | 85.8 | 89.3 | — | — | — |
| Central Mississippi | 91.9 | 82.4 | 87.2 | 95.6 | 86.7 | 91.2 | 93.0 | 85.5 | 89.3 | — | — | — |
| Lower Mississippi | 92.0 | 82.9 | 87.5 | 96.2 | 86.1 | 91.2 | 92.7 | 85.1 | 88.9 | — | — | — |
| North Plains | NS | NS | NS | NS | NS | NS | NS | NS | NS | — | — | — |
| Central Plains | NS | NS | NS | NS | NS | NS | NS | NS | NS | — | — | — |
| South Plains | 92.1 | 83.5 | 87.8 | 95.9 | 84.4 | 90.2 | 92.4 | 84.4 | 88.4 | — | — | — |
| South Texas | 92.0 | 82.9 | 87.5 | 96.7 | 86.2 | 91.5 | 93.6 | 85.1 | 89.4 | — | — | — |
| South Mountain States | 91.3 | 82.3 | 86.8 | 96.5 | 86.0 | 91.3 | 92.3 | 84.7 | 88.5 | — | — | — |
| North Mountain States | 91.2 | 82.7 | 86.9 | NS | NS | NS | 90.8 | 84.4 | 87.6 | — | — | — |
| Pacific Northwest | 92.3 | 83.3 | 87.9 | 96.0 | 86.5 | 91.2 | 92.3 | 85.2 | 88.8 | — | — | — |
| North California | 92.4 | 83.4 | 87.9 | 96.6 | 86.2 | 91.4 | 93.1 | 85.3 | 89.2 | — | — | — |
| South California | 92.8 | 83.1 | 87.9 | 96.6 | 85.9 | 91.3 | 93.2 | 84.7 | 89.0 | — | — | — |
| **Average** | | | | | | | | | | | | |
| **Summer 1981** | **91.9** | **83.0** | **87.4** | **96.3** | **86.2** | **91.3** | **92.8** | **85.1** | **89.0** | — | — | — |
| **Summer 1980** | **92.1** | **83.4** | **87.8** | **96.1** | **86.4** | **91.6** | **96.2** | **85.2** | **88.9** | (a) | (a) | (a) |

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(X) In 1981, DOE began two classifications for leaded gasoline—Below 93 octane and Above 93 octane. The data on above 93 octane were not available when this latest study was completed and published.

NS—No samples; (a) Comparable data for 1980 not available. See (X) above.

Source: Bartlesville (Okla.) Energy Technology Center, Department of Energy, Motor Gasolines, Summer, 1981, May, 1982.

# Diesel Sales for Highway Use

**Diesel fuel sales** for motor vehicles slumped in 1980—not much, but enough to be heard. Diesel sales totaled 323.4-million bbl. in 1981 versus 327.4-million bbl. in 1979. Off-highway sales of diesel—primarily for farm and construction use—also declined in 1980. Sales in 1980 amounted to 45-million bbl. versus 63-million bbl. in 1979. Percentage wise, the off-highway decline was more impressive, however—29%. Because the government changed its format for collecting fuel oil data, the figures below cannot be compared with prior years.

(Add 000 bbl.)

| | | On-Highway | | | Off-Highway | | |
|---|---|---|---|---|---|---|---|
| Region | State | 1980 | 1979 | % Change | 1980 | 1979 | % Change |
| **New England** | Connecticut | 2,446 | 2,426 | 0.8% | 422 | 206 | -104.9% |
| | Maine | 1,349 | 1,384 | -2.5 | 183 | 293 | -37.5 |
| | Massachusetts | 4,346 | 4,291 | 1.3 | 250 | 470 | -45.8 |
| | New Hampshire | 656 | 645 | 1.7 | 99 | 87 | 13.8 |
| | Rhode Island | 638 | 544 | 17.3 | 37 | 43 | -14.0 |
| | Vermont | 699 | 736 | -5.0 | 191 | 338 | -43.5 |
| | **Total** | **10,134** | **10,026** | **1.0** | **1,182** | **1,437** | **-17.7** |
| **Mid-Atlantic** | New Jersey | 8,066 | 7,062 | 14.2 | 665 | 802 | -17.1 |
| | New York | 7,814 | 8,074 | -3.2 | 1,054 | 1,249 | -15.6 |
| | Pennsylvania | 16,555 | 15,311 | 8.1 | 2,564 | 3,939 | -34.9 |
| | **Total** | **32,435** | **30,447** | **6.5** | **4,283** | **5,990** | **-28.5** |
| **South Atlantic** | Delaware | 825 | 654 | 26.1 | 167 | 79 | 111.4 |
| | Dist. of Columbia | 406 | 428 | -5.1 | 13 | 28 | -53.6 |
| | Florida | 11,704 | 10,085 | 16.0 | 1,082 | 586 | 84.6 |
| | Georgia | 10,554 | 10,611 | 0.5 | 386 | 218 | 77.1 |
| | Maryland | 3,891 | 3,524 | 10.4 | 658 | 735 | -10.5 |
| | North Carolina | 8,987 | 9,240 | -2.7 | 494 | 552 | -10.5 |
| | South Carolina | 5,372 | 5,485 | -2.0 | 265 | 282 | -6.0 |
| | Virginia | 7,466 | 6,404 | 16.6 | 843 | 939 | -10.2 |
| | West Virginia | 2,904 | 1,836 | 59.2 | 1,069 | 1,138 | -6.1 |
| | **Total** | **52,109** | **48,267** | **8.0** | **4,977** | **4,557** | **-9.2** |
| **North East Central** | Illinois | 14,308 | 16,828 | -15.0 | 1,281 | 1,699 | -24.6 |
| | Indiana | 13,551 | 12,953 | 4.6 | 617 | 457 | 35.0 |
| | Michigan | 7,140 | 8,816 | -19.0 | 652 | 1,294 | -49.6 |
| | Ohio | 16,604 | 16,935 | -2.0 | 2,593 | 6,522 | -602.4 |
| | Wisconsin | 7,153 | 7,618 | -6.1 | 569 | 610 | -6.7 |
| | **Total** | **58,756** | **63,150** | **-7.0** | **5,712** | **10,582** | **-460.2** |
| **North West Central** | Iowa | 6,312 | 6,957 | -9.3 | 312 | 565 | -44.8 |
| | Kansas | 5,449 | 5,511 | -1.1 | 502 | 1,892 | -73.5 |
| | Minnesota | 5,936 | 7,212 | -17.7 | 727 | 813 | -10.6 |
| | Missouri | 8,430 | 8,916 | -5.5 | 923 | 1,149 | -19.7 |
| | Nebraska | 3,426 | 3,434 | -0.2 | 272 | 217 | 25.3 |
| | North Dakota | 1,849 | 1,939 | -4.6 | 153 | 229 | -33.2 |
| | South Dakota | 1,708 | 1,882 | -1.8 | 129 | 384 | -66.4 |
| | **Total** | **33,110** | **35,851** | **-7.6** | **3,018** | **5,249** | **-45.2** |
| **East South Central** | Alabama | 7,570 | 6,731 | 12.5 | 676 | 731 | -7.5 |
| | Kentucky | 5,890 | 5,553 | 5.7 | 3,320 | 2,015 | 64.8 |
| | Mississippi | 4,824 | 4,443 | 8.6 | 789 | 1,898 | -58.4 |
| | Tennessee | 9,080 | 9,631 | -5.7 | 601 | 1,243 | -51.6 |
| | **Total** | **27,364** | **26,358** | **3.8** | **5,386** | **5,887** | **-8.5** |
| **South West Central** | Arkansas | 4,942 | 5,096 | -3.0 | 1,411 | 1,894 | -25.5 |
| | Louisiana | 6,756 | 6,819 | -0.9 | 1,163 | 1,768 | -34.2 |
| | Oklahoma | 7,144 | 7,369 | -3.1 | 1,133 | 4,126 | -725.4 |
| | Texas | 28,170 | 29,662 | -5.0 | 4,394 | 6,947 | -36.7 |
| | **Total** | **47,012** | **48,946** | **-4.0** | **8,101** | **14,735** | **-45.0** |
| **Rockies** | Arizona | 5,137 | 5,328 | -3.6 | 737 | 675 | -9.2 |
| | Colorado | 3,358 | 3,603 | -6.8 | 962 | 730 | 31.8 |
| | Idaho | 1,293 | 1,932 | -33.1 | 474 | 363 | 30.6 |
| | Montana | 2,315 | 2,535 | -8.7 | 441 | 517 | -14.7 |
| | Nevada | 1,833 | 1,590 | 15.3 | 194 | 324 | -40.1 |
| | New Mexico | 3,939 | 3,757 | 4.8 | 1,149 | 2,203 | -47.8 |
| | Utah | 2,609 | 2,623 | -0.5 | 707 | 1,045 | -32.3 |
| | Wyoming | 2,206 | 2,202 | — | 1,921 | 2,153 | -10.8 |
| | **Total** | **22,690** | **23,570** | **-3.7** | **6,585** | **8,010** | **-17.8** |
| **Pacific Coast** | Alaska | 1,079 | 284 | 279.9 | 187 | 435 | -57.0 |
| | California | 27,083 | 28,574 | -5.2 | 2,702 | 3,905 | -30.8 |
| | Hawaii | 428 | 399 | 7.3 | 237 | 182 | 30.2 |
| | Oregon | 5,714 | 5,618 | 1.7 | 1,496 | 943 | 58.6 |
| | Washington | 5,517 | 5,952 | -7.3 | 1,159 | 1,280 | -9.5 |
| | **Total** | **39,821** | **40,827** | **-2.5** | **5,781** | **6,745** | **-15.2** |
| | **U.S. Totals** | **323,431** | **327,442** | **-1.2%** | **45,025** | **63,102** | **-28.6%** |

Source: Energy Data Reports Sales of Fuel Oil and Kerosene in 1980, issued February, 1982.

# Wholesale Price Trends Through 1981

| | Refinery products in eight refinery markets representing total U.S. | | | | | | Crude | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Average 4 products | | | |
| Year | Motor gasoline $ gal. | Kero-sine $ gal. | Light fuel ¢ gal. | Heavy fuel ¢ gal. | ¢ gal. | $/bbl. | 8 areas $/bbl. | Products vs. crude $/bbl. |
| 1981 (a) | $101.63 | $100.03 | 97.20¢ | 61.17¢ | 88.66¢ | $37.29 | $31.845 | $5.45 |
| 1980 | 87.40 | 80.26 | 78.21 | 44.43 | 72.77 | 30.57 | 21.190 | 9.38 |
| 1979 | 56.84 | 56.50 | 54.47 | 33.63 | 49.50 | 20.79 | 12.640 | 8.15 |
| 1978 | 39.22 | 37.23 | 35.66 | 23.00 | 33.72 | 14.16 | 9.000 | 5.16 |
| 1977 | 36.99 | 35.81 | 34.41 | 25.87 | 32.21 | 13.95 | 8.570 | 5.38 |
| 1976 | 33.82 | 31.67 | 30.38 | 21.66 | 29.55 | 12.41 | 8.141 | 4.26 |
| 1975 | 30.27 | 27.41 | 26.09 | 22.03 | 27.03 | 11.35 | 7.560 | 3.79 |
| 1974 | 25.53 | 24.02 | 22.57 | 20.43 | 23.48 | 9.36 | 6.739 | 2.621 |
| 1973 | 14.72 | 14.08 | 12.61 | 8.45 | 12.49 | 5.25 | 3.885 | 1.365 |
| 1972 | 12.70 | 12.87 | 10.61 | 7.60 | 10.87 | 4.57 | 3.388 | 1.182 |
| 1971 | 12.70 | 12.90 | 10.75 | 7.76 | 10.94 | 4.59 | 3.385 | 1.205 |
| 1970 | 12.33 | 12.43 | 10.45 | 6.14 | 10.20 | 4.28 | 3.177 | 1.103 |
| 1965 | 11.52 | 11.28 | 9.04 | 4.81 | 9.12 | 3.83 | 2.864 | 0.966 |
| 1960 | 11.61 | 11.17 | 8.79 | 4.88 | 9.15 | 3.84 | 2.882 | 0.958 |

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(a) Preliminary

Source: Independent Petroleum Assn. of America. Product figures reflect trends in prices but not the actual sales realizations for producers or refiners.

# AvGas, LPG and Natural-Gas Prices

| | Aviation (¢ per gal. excluding taxes) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Av. Gasoline | | Naphtha-type (a) | Kerosine-type | | Wholesale | | |
| | Wholesale (b) | Retail (b) | Retail (b) | Wholesale (b) | Retail (b) | Propane | Butane | Natural Gas ¢ per MCF for Residential Heating |
| **1981** | | | | | | | | |
| January | 118.9¢ | 121.6¢ | 99.2¢ | 97.1¢ | 95.7¢ | 46.5¢ | 66.1¢ | 406.9¢ |
| February | 121.3 | 128.1 | 102.7 | 103.6 | 101.6 | 48.2 | 63.0 | 409.3 |
| March | 127.2 | 131.1 | 106.9 | 104.8 | 106.3 | 48.3 | 62.1 | 417.4 |
| April | 117.5 | 131.3 | 109.0 | 103.8 | 106.4 | 49.3 | 60.1 | 421.7 |
| May | 120.7 | 133.5 | 109.1 | 104.4 | 106.2 | 48.6 | 56.8 | 457.1 |
| June | 116.5 | 132.1 | 107.6 | 102.3 | 104.8 | 46.0 | 52.7 | 457.6 |
| July | 120.1 | 133.4 | 106.3 | 100.5 | 103.8 | 46.0 | 56.5 | 460.4 |
| August | 120.0 | 132.5 | 105.7 | 101.4 | 103.3 | 47.2 | 60.6 | 466.6 |
| September | 121.0 | 133.5 | 105.6 | 103.0 | 103.3 | 47.7 | 64.6 | 486.3 |
| October | 117.2 | 134.5 | 104.8 | 99.9 | 101.1 | 47.3 | 64.7 | 487.4 |
| November | 114.4 | 133.2 | 104.6 | 101.9 | 102.6 | 45.5 | 61.6 | 473.8 |
| December | 116.8 | 131.9 | 103.8 | 101.9 | 102.6 | 45.5 | 55.4 | 471.1 |
| **1980** | | | | | | | | |
| January | 90.6 | 90.0 | 76.0 | 83.4 | 77.0 | 41.8 | 73.3 | 354.9 |
| February | 98.5 | 97.8 | 80.1 | 86.2 | 83.0 | 42.7 | 70.1 | 357.9 |
| March | 102.9 | 107.0 | 84.1 | 86.6 | 86.3 | 41.0 | 66.8 | 368.1 |
| April | 104.8 | 109.6 | 83.2 | 88.4 | 87.4 | 41.2 | 63.1 | 367.8 |
| May | 106.2 | 109.7 | 89.1 | 89.0 | 87.6 | 41.7 | 63.7 | 393.9 |
| June | 107.7 | 111.4 | 90.0 | 86.1 | 88.6 | 41.2 | 58.2 | 394.8 |
| July | 109.3 | 113.4 | 91.4 | 88.3 | 89.7 | 40.8 | 53.8 | 410.6 |
| August | 110.2 | 112.9 | 90.6 | 86.2 | 90.7 | 40.6 | 53.1 | 413.1 |
| September | 110.8 | 113.3 | 92.9 | 86.4 | 88.8 | 41.4 | 51.2 | 417.0 |
| October | 110.8 | 113.0 | 91.1 | 87.8 | 88.6 | 43.2 | 54.3 | 420.6 |
| November | 112.4 | 113.0 | 92.5 | 89.9 | 90.0 | 45.1 | 65.5 | 396.1 |
| December | 115.1 | 117.0 | 96.4 | 91.5 | 91.5 | 46.6 | 68.9 | 403.3 |
| **Average 1981** | **118.8** | **131.5** | **105.7** | **102.0** | **103.1** | **47.2** | **60.4** | **451.3** |
| 1980 | 107.2 | 109.4 | 88.2 | 87.5 | 87.4 | 42.6 | 61.8 | 391.5 |
| 1979 | 68.5 | 69.5 | 52.3 | 66.5 | 55.1 | 29.5 | 45.8 | 323.1 |
| 1978 | 51.0 | 52.1 | 37.5 | 38.9 | 38.9 | 24.0 | 23.0 | 262.6 |
| 1977 | 46.7 | 47.7 | 35.0 | 36.7 | 35.8 | 25.0 | 24.0 | 226.4 |
| 1976 | 42.4 | 43.1 | 31.5 | 32.5 | 31.2 | 20.6 | 21.9 | 184.6 |
| 1975 | — | — | — | — | — | — | — | 154.2 |
| 1974 | — | — | — | — | — | — | — | 125.3 |
| 1973 | — | — | — | — | — | — | — | 108.2 |

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(a) Nearly all naphtha-type fuels are sold directly to Defense Fuel Supply Center; hence, wholesale prices are not applicable; (b) Wholesale refers to the price of aviation fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and aviation-fuel distributors; retail refers to the price of aviation fuel sold to ultimate consumers, including commercial airline and military accounts. (c) Wholesale refers to the price at which refiners, resellers, and gas plants sell to one another, including sales to agricultural and industrial accounts but excludes butane/propane mixtures.

Source: Department of Energy, Monthly Energy Review, March 1982.

# Gasoline Prices by Grades and Months (a)

**(U.S. averages, retail, including taxes, in ¢ per gal.)**

| | | Leaded Regular | Unleaded Regular | Leaded Premium | Average for All Types |
|---|---|---|---|---|---|
| **1981** | January | 123.8¢ | 129.8¢ | 133.8¢ | 126.9¢ |
| | February | 132.1 | 138.2 | 141.0 | 135.3 |
| | March | 135.2 | 141.7 | 144.9 | 138.8 |
| | April | 134.4 | 141.2 | 145.1 | 138.1 |
| | May | 133.3 | 140.0 | 144.7 | 137.0 |
| | June | 132.4 | 139.1 | 144.6 | 136.2 |
| | July | 131.5 | 138.2 | 144.6 | 135.3 |
| | August | 131.0 | 137.6 | 144.4 | 134.8 |
| | September | 130.5 | 137.6 | 145.6 | 135.8 |
| | October | 129.9 | 137.1 | 145.7 | 135.3 |
| | November | 129.7 | 136.9 | 146.2 | 135.1 |
| | December | 129.3 | 136.5 | 146.0 | 134.8 |
| | **Average** | **131.1** | **137.8** | **143.9** | **135.3** |
| **1980** | January | 108.6 | 113.1 | 114.9 | 111.0 |
| | February | 115.9 | 120.7 | 123.3 | 118.6 |
| | March | 120.2 | 125.2 | 127.7 | 123.0 |
| | April | 121.2 | 126.4 | 129.2 | 124.2 |
| | May | 121.5 | 126.6 | 129.5 | 124.4 |
| | June | 121.7 | 126.9 | 130.0 | 124.6 |
| | July | 121.6 | 127.5 | 130.7 | 124.7 |
| | August | 121.0 | 126.7 | 131.0 | 124.3 |
| | September | 119.7 | 125.7 | 130.4 | 123.1 |
| | October | 118.8 | 125.0 | 130.1 | 122.3 |
| | November | 118.8 | 125.0 | 129.9 | 122.2 |
| | December | 119.7 | 125.8 | 131.0 | 123.1 |
| | **Average** | **119.1** | **124.5** | **128.1** | **122.1** |
| **Average** | 1979 | 85.7 | 90.3 | 92.2 | 88.2 |
| | 1978 | 62.6 | 67.0 | 69.4 | 65.2 |
| | 1977 | 62.2 | 65.6 | 67.4 | NA |
| | 1976 | 59.0 | 61.4 | 63.6 | NA |
| | 1975 | 56.7 | NA | 60.9 | NA |
| | 1974 | 53.2 | NA | 56.9 | NA |

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(a) Department of Energy discontinued in 1980 its series breaking out full-service and self-service prices, see Factbook '81 for last reports of this type.
Source: Department of Energy, Monthly Energy Review, March 1982.

# Distributor Diesel, Distillate and Resid Prices

| | No. 2 Motor Fuel (¢ per gal. ex. taxes) | | No. 2 Residential (¢ per gal.) | | | No. 6 ($ per bbl.) (a) | |
|---|---|---|---|---|---|---|---|
| | Wholesale | Retail | Purchase Price | Selling Price | Margin | Wholesale | Retail |
| **1981** | | | | | | | |
| January | 92.5¢ | 100.9¢ | 98.6¢ | 114.4¢ | 15.1¢ | $31.14 | $33.65 |
| February | 99.5 | 106.1 | 106.0 | 123.4 | 16.1 | 31.81 | 36.04 |
| March | 101.7 | 108.8 | 106.3 | 125.5 | 17.6 | 31.78 | 36.11 |
| April | 101.3 | 107.7 | 105.2 | 123.9 | 17.7 | 30.56 | 34.70 |
| May | 100.8 | 106.8 | 104.0 | 122.7 | 17.6 | 30.41 | 34.11 |
| June | 99.5 | 106.6 | 103.0 | 120.9 | 16.9 | 25.95 | 31.03 |
| July | 98.8 | 103.8 | 102.7 | 121.0 | 17.1 | 26.52 | 30.57 |
| August | 97.8 | 105.9 | 102.2 | 119.4 | 16.2 | 27.01 | 30.52 |
| September | 97.6 | 104.8 | 101.6 | 119.7 | 17.2 | 26.20 | 30.33 |
| October | 97.4 | 105.3 | 101.1 | 118.8 | 16.6 | 26.78 | 30.32 |
| November | 98.4 | 105.2 | 102.3 | 120.8 | 17.6 | 27.99 | 30.16 |
| December | 98.3 | 105.1 | 102.6 | 122.0 | 18.3 | 27.28 | 30.85 |
| **Average** | **98.5** | **106.0** | **102.6** | **120.5** | **16.8** | **28.87** | **32.49** |
| **1980** | | | | | | | |
| January | 76.0 | 82.2 | 75.2 | 90.8 | 16.2 | 24.41 | 26.21 |
| February | 78.3 | 85.0 | 79.0 | 95.3 | 16.7 | 23.34 | 26.48 |
| March | 79.8 | 87.8 | 80.4 | 97.1 | 17.1 | 21.11 | 25.33 |
| April | 80.4 | 88.0 | 81.0 | 97.4 | 17.0 | 19.09 | 22.87 |
| May | 80.5 | 87.8 | 81.4 | 97.2 | 16.3 | 20.22 | 23.75 |
| June | 81.7 | 88.6 | 82.5 | 97.9 | 15.8 | 20.44 | 24.09 |
| July | 81.9 | 87.6 | 83.0 | 97.9 | 15.3 | 21.28 | 23.86 |
| August | 81.6 | 86.9 | 82.9 | 97.9 | 15.2 | 22.25 | 25.00 |
| September | 80.3 | 86.6 | 83.0 | 98.1 | 15.4 | 22.47 | 25.31 |
| October | 81.5 | 85.9 | 83.7 | 98.7 | 15.3 | 24.06 | 26.68 |
| November | 83.6 | 88.9 | 86.1 | 101.1 | 13.8 | 28.12 | 30.10 |
| December | 87.5 | 92.4 | 91.3 | 106.5 | 14.1 | 29.76 | 32.33 |
| **Average** | **81.2** | **87.3** | **82.2** | **97.8** | **15.8** | **23.14** | **26.09** |
| **Average** 1979 | 58.2 | 62.4 | 52.8 | 65.4 | 12.8 | 17.66 | 18.67 |
| 1978 | 37.1 | 40.2 | 38.5 | 49.2 | 10.9 | 11.51 | 12.77 |
| 1977 | 36.1 | 39.3 | 36.9 | 46.0 | 9.6 | 12.01 | 13.22 |
| 1976 | 31.9 | 34.7 | 32.6 | 40.6 | 8.8 | 10.60 | 11.46 |
| 1975 | — | — | 31.2 | 37.7 | 7.4 | 10.44 | 11.65 |

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(a) This is an average for all sulfur levels of No. 2; 1% sulfur is fairly close to the average used here. Less than 1% is more expensive, more than 1¢ less costly; (b) Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded jobbers, unbranded jobbers, and commercial accounts. Retail refers to the price at which company-owned and operated retail dealers sell to customers.
Source: Department of Energy, Monthly Energy Report, March 1982.

# Residential Heating Oil Prices by Region

**(¢ per gal.)**

| | Standard Federal Regions (a) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **1981** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| January | 116.2¢ | 117.1¢ | 113.2¢ | 114.0¢ | 110.4¢ | (b) | 106.3¢ | 108.6¢ | (b) | 107.5¢ |
| February | 125.8 | 126.6 | 123.0 | 124.4 | 117.8 | (b) | 114.2 | 113.1 | (b) | 113.7 |
| March | 127.6 | 128.4 | 125.0 | 125.3 | 119.3 | (b) | 115.4 | 119.3 | 111.5¢ | 116.5 |
| April | 126.8 | 126.6 | 122.7 | 124.8 | 118.3 | (b) | 114.7 | 118.4 | (b) | 117.5 |
| May | 125.5 | 125.6 | 122.1 | 118.8 | 117.3 | (b) | 114.5 | 115.1 | 114.1 | 115.6 |
| June | 124.1 | 123.6 | 121.1 | 115.9 | 116.5 | (b) | 112.5 | 116.0 | (b) | 117.1 |
| July | 123.3 | 122.9 | 120.6 | 120.2 | 116.0 | (b) | 115.9 | 116.2 | (b) | 118.3 |
| August | 122.7 | 122.2 | 117.9 | 117.4 | 115.1 | (b) | 112.1 | 116.9 | (b) | 117.7 |
| September | 122.7 | 121.4 | 118.5 | 120.5 | 116.2 | (b) | 111.6 | 116.8 | (b) | 117.6 |
| October | 122.5 | 122.0 | 115.3 | 117.6 | 116.3 | (b) | 112.0 | 115.8 | (b) | 118.2 |
| November | 123.3 | 123.2 | 119.5 | 118.2 | 116.7 | (b) | 114.1 | 115.8 | (b) | 118.8 |
| December | 124.8 | 124.7 | 120.7 | 119.0 | 117.4 | (b) | 112.4 | 117.1 | (b) | 120.0 |
| **1980** | | | | | | | | | | |
| January | 91.8 | 91.0 | 90.2 | 88.6 | 90.4 | (b) | 90.0 | 90.2 | 89.6 | 91.0 |
| February | 96.7 | 95.3 | 94.7 | 93.0 | 93.5 | (b) | 93.6 | 93.5 | 95.8 | 95.7 |
| March | 98.7 | 97.2 | 96.5 | 94.8 | 94.3 | (b) | 95.1 | 95.9 | 93.9 | 97.6 |
| April | 99.2 | 97.3 | 96.6 | 94.1 | 94.5 | (b) | 95.3 | 99.5 | 94.7 | 99.0 |
| May | 98.7 | 97.3 | 96.4 | 94.2 | 95.8 | (b) | 95.2 | 97.7 | 95.5 | 98.6 |
| June | 99.8 | 97.9 | 96.8 | 95.1 | 95.8 | (b) | 95.3 | 98.4 | 96.0 | 99.8 |
| July | 100.3 | 98.1 | 96.6 | 94.2 | 96.2 | (b) | 93.1 | 97.0 | 96.7 | 100.2 |
| August | 100.2 | 97.9 | 96.8 | 94.8 | 95.7 | (b) | 95.4 | 92.1 | 99.7 | 100.4 |
| September | 100.5 | 98.2 | 97.0 | 94.7 | 95.7 | (b) | 93.7 | 93.0 | 97.2 | 100.6 |
| October | 101.1 | 98.8 | 97.4 | 95.6 | 95.9 | (b) | 94.7 | 94.1 | 98.6 | 100.4 |
| November | 102.5 | 103.0 | 99.9 | 101.5 | 98.8 | (b) | 95.2 | 98.5 | 101.0 | 103.1 |
| December | 108.2 | 108.5 | 105.3 | 106.6 | 103.4 | (b) | 99.6 | 101.8 | (b) | 105.6 |

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(a) Standard Federal Regions are as follows: 1. Me., N.H., Vt., Mass., Conn., R.I.; 2. N.Y., N.J., Puerto Rico and Virgin Islands; 3. Pa., Md., W. Va., Va., D.C., Del.; 4. Ky., Tenn., N.C., S.C., Miss., Ala., Ga., Fla., Canal Zone; 5. Minn., Wis., Mich., Ill., Ind., Ohio; 6. Tex., N.M., Okla., Ark., La.; 7. Kan., Mo., Iowa, Neb.; 8. Mont., N.D., S.D., Wyo., Utah, Colo.; 9. Calif., Nev., Ariz., Hawaii, Trust Terr. of Pacific Is., American Samoa, Guam; 10. Wash., Ore., Ida., Alaska; (b) Not available for publication because samples are too small

Source: Department of Energy, Monthly Energy Review, March, 1982.

# Average No. 6 Residual Fuel Oil Prices

**($ per bbl., excluding taxes)**

| | 0.0% to 0.3% sulfur | | 0.31% to 1.0% sulfur | | Greater than 1.0% sulfur | | Average | |
|---|---|---|---|---|---|---|---|---|
| | Wholesale | Retail | Wholesale | Retail | Wholesale | Retail | Wholesale | Retail |
| **1981** | | | | | | | | |
| January | $34.27 | $37.23 | $32.12 | $33.96 | $29.12 | $31.35 | $31.14 | $33.65 |
| February | 38.04 | 41.60 | 34.96 | 37.32 | 28.96 | 32.02 | 31.81 | 36.04 |
| March | 37.78 | 41.19 | 34.47 | 38.01 | 29.55 | 31.95 | 31.78 | 36.11 |
| April | 35.66 | 41.71 | 33.10 | 35.94 | 28.35 | 30.56 | 30.56 | 34.70 |
| May | 33.61 | 41.09 | 32.53 | 35.94 | 28.77 | 30.64 | 30.41 | 34.11 |
| June | 28.01 | 38.30 | 26.71 | 32.38 | 25.33 | 27.16 | 25.95 | 31.03 |
| July | 29.56 | 39.02 | 27.38 | 31.93 | 25.62 | 25.96 | 26.52 | 30.57 |
| August | 30.48 | 36.57 | 27.77 | 32.04 | 26.03 | 26.20 | 27.01 | 30.52 |
| September | 29.91 | 39.17 | 27.46 | 32.08 | 24.80 | 26.26 | 26.20 | 30.33 |
| October | 30.26 | 39.90 | 28.64 | 31.88 | 24.96 | 26.18 | 26.78 | 30.32 |
| November | 31.71 | 39.48 | 29.63 | 31.02 | 26.09 | 26.45 | 28.03 | 30.16 |
| December | 30.88 | 37.65 | 28.04 | 32.09 | 25.51 | 26.53 | 27.28 | 30.85 |
| **Average** | **32.85** | **39.31** | **30.58** | **33.69** | **27.09** | **28.57** | **28.87** | **32.49** |
| **1980** | | | | | | | | |
| January | 29.11 | 30.35 | 26.15 | 28.12 | 21.56 | 21.98 | 24.41 | 26.21 |
| February | 27.07 | 30.32 | 25.82 | 28.15 | 20.21 | 22.22 | 23.34 | 26.48 |
| March | 26.88 | 30.20 | 23.73 | 27.29 | 17.81 | 20.34 | 21.11 | 25.33 |
| April | 25.16 | 28.69 | 20.38 | 24.78 | 16.41 | 18.36 | 19.09 | 22.87 |
| May | 25.48 | 31.73 | 22.72 | 25.77 | 17.72 | 18.04 | 20.22 | 23.75 |
| June | 23.14 | 31.37 | 22.35 | 25.44 | 17.72 | 19.27 | 20.44 | 24.09 |
| July | 24.89 | 28.51 | 23.44 | 25.55 | 19.20 | 20.58 | 21.28 | 23.86 |
| August | 23.20 | 30.93 | 24.98 | 26.11 | 20.42 | 21.45 | 22.25 | 25.00 |
| September | 24.27 | 33.12 | 23.46 | 26.31 | 20.62 | 21.71 | 22.47 | 25.31 |
| October | 25.72 | 31.88 | 25.86 | 28.00 | 22.30 | 23.29 | 24.06 | 26.68 |
| November | 29.52 | 33.70 | 29.40 | 30.89 | 27.08 | 27.50 | 28.12 | 30.10 |
| December | 31.69 | 35.76 | 31.29 | 32.61 | 28.39 | 30.03 | 29.76 | 32.33 |
| **Average** | **26.41** | **31.13** | **24.91** | **27.59** | **20.77** | **22.11** | **23.14** | **26.09** |
| **Average** 1979 | 19.87 | 21.21 | 18.33 | 19.33 | 15.89 | 16.44 | 17.66 | 18.67 |
| 1978 | 12.77 | 14.47 | 11.95 | 12.78 | 10.73 | 11.70 | 11.51 | 12.75 |
| 1977 | 13.45 | 14.36 | 12.09 | 13.45 | 11.31 | 12.27 | 11.96 | 13.23 |
| 1976 | 12.20 | 12.54 | 10.83 | 11.79 | 9.98 | 10.43 | 10.72 | 11.49 |

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(a) Wholesale refers to the price of residual fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and other residual dealers. Retail refers to the price at which residual fuel oil is sold to ultimate consumers such as utility, industrial, commercial and residential accounts.

Source: Department of Energy, Monthly Energy Review, March 1982.

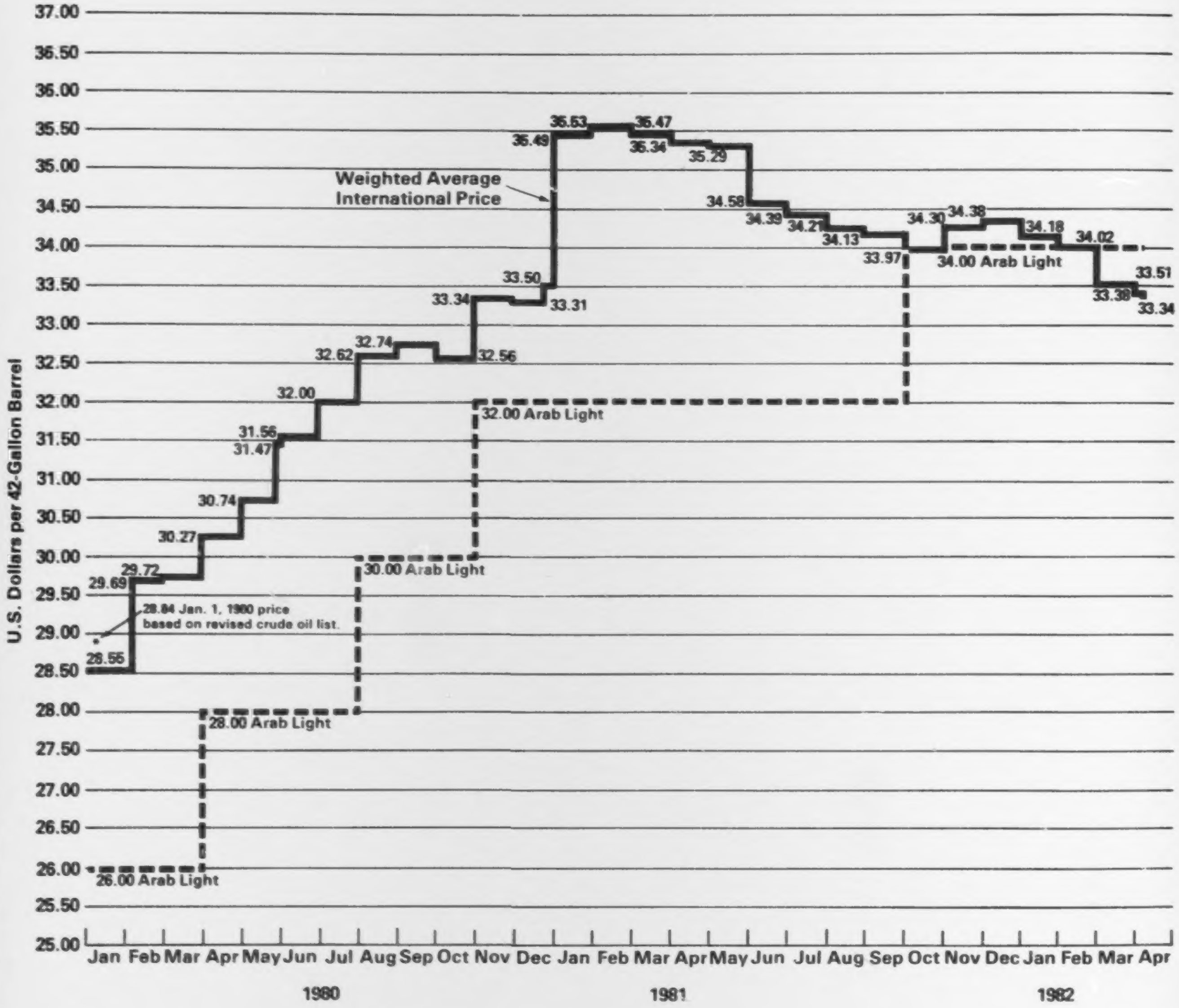
# Spot Market Product Prices

($ per bbl.)

| | | Gasoline | | Fuel Oil | | Residual | |
|---|---|---|---|---|---|---|---|
| **1982** | | Rotterdam (98 Octane) | New York (89 Octane) | Rotterdam (0.5% Sulfur) | New York (0.2% Sulfur) | Rotterdam (1% Sulfur) | New York (1% Sulfur) |
| Jan | 8 | $39.98 | $39.67 | $44.30 | $40.42 | $31.68 | $28.40 |
| | 15 | 38.68 | 38.72 | 43.57 | 39.90 | 30.78 | 29.00 |
| | 22 | 38.57 | 38.93 | 40.88 | 39.38 | 29.50 | 28.35 |
| | 29 | 38.22 | 38.30 | 39.21 | 38.22 | 29.73 | 28.70 |
| Feb | 5 | 37.22 | 37.67 | 38.40 | 38.54 | 28.68 | 28.50 |
| | 12 | 37.22 | 37.61 | 37.87 | 37.90 | 27.93 | 29.25 |
| | 19 | 35.93 | 37.61 | 37.87 | 37.80 | 27.93 | 29.25 |
| | 26 | 35.52 | 35.72 | 37.00 | 37.38 | 28.08 | 28.50 |
| Mar | 5 | 35.46 | 34.88 | 35.32 | 35.28 | 28.08 | 28.00 |
| | 12 | 34.41 | 34.57 | 34.38 | 33.60 | 26.95 | 27.00 |
| | 19 | 32.42 | 34.55 | 34.99 | 34.02 | 26.50 | 27.00 |
| | 26 | 32.83 | 34.52 | 36.13 | 34.06 | 26.65 | 26.25 |
| Apr | 2 | 36.64 | 36.54 | 35.52 | 34.54 | 26.80 | 26.25 |
| | 9 | 36.17 | 38.01 | 35.72 | 36.12 | 27.78 | 27.70 |
| | 16 | 36.64 | 38.22 | 36.66 | 36.54 | 28.53 | 28.50 |
| | 23 | 37.51 | 39.69 | 37.87 | 38.22 | 28.75 | 28.75 |
| **1981** | | | | | | | |
| Jan | 2 | 43.67 | 42.01 | 40.35 | 40.32 | 35.66 | 34.25 |
| | 9 | 43.14 | 42.98 | 42.02 | 42.95 | 35.51 | 35.50 |
| | 16 | 43.20 | 42.46 | 42.49 | 42.74 | 36.26 | 37.00 |
| | 23 | 43.73 | 43.19 | 41.96 | 42.63 | 37.39 | 38.00 |
| | 30 | 42.91 | 43.94 | 41.62 | 42.63 | 37.76 | 37.25 |
| Feb | 6 | 43.38 | 44.31 | 41.62 | 43.47 | 37.09 | 37.25 |
| | 13 | 43.38 | 43.79 | 41.62 | 43.05 | 37.09 | 37.25 |
| | 20 | 41.91 | 43.18 | 41.15 | 42.21 | 36.64 | 36.25 |
| | 27 | 42.38 | 43.72 | 41.78 | 41.79 | 36.49 | 36.00 |
| Mar | 6 | 42.38 | 43.63 | 41.29 | 41.27 | 37.16 | 35.25 |
| | 13 | 42.03 | 42.58 | 41.35 | 40.74 | 37.16 | 34.75 |
| | 20 | 42.09 | 42.88 | 41.42 | 40.32 | 37.09 | 33.50 |
| | 27 | 41.38 | 42.76 | 41.08 | 39.48 | 35.74 | 32.90 |
| Apr | 3 | 41.79 | 42.08 | 40.75 | 39.48 | 35.66 | 32.50 |
| | 10 | 41.62 | 43.30 | 40.42 | 40.43 | 34.83 | 33.00 |
| | 17 | 41.91 | 42.46 | 38.94 | 40.21 | 34.68 | 32.75 |
| | 24 | 41.79 | 41.52 | 38.20 | 38.58 | 35.06 | 32.50 |
| May | 1 | 41.97 | 41.24 | 36.86 | 38.74 | 34.01 | 32.25 |
| | 8 | 41.79 | 41.58 | 36.39 | 38.74 | 32.66 | 31.00 |
| | 15 | 40.97 | 41.62 | 36.93 | 38.74 | 31.31 | 29.50 |
| | 22 | 40.04 | 42.08 | 36.60 | 38.96 | 31.23 | 28.25 |
| | 29 | 41.27 | 41.03 | 36.60 | 38.64 | 31.16 | 26.90 |
| June | 5 | 42.15 | 41.39 | 35.99 | 38.43 | 28.90 | 26.50 |
| | 12 | 42.15 | 41.64 | 36.13 | 37.80 | 27.33 | 25.50 |
| | 19 | 42.38 | 41.85 | 36.86 | 37.59 | 26.13 | 25.00 |
| | 26 | 43.85 | 42.27 | 37.53 | 38.22 | 26.13 | 27.75 |
| July | 3 | 44.96 | 42.42 | 37.53 | 38.22 | 25.98 | 27.00 |
| | 10 | 44.96 | 42.84 | 37.53 | 38.22 | 25.98 | 28.50 |
| | 17 | 46.37 | 43.22 | 39.75 | 39.06 | 28.98 | 28.50 |
| | 24 | 46.66 | 43.34 | 38.61 | 39.48 | 29.05 | 28.25 |
| | 31 | 46.72 | 42.97 | 38.40 | 39.35 | 28.90 | 27.75 |
| Aug | 7 | 45.37 | 43.05 | 39.07 | 39.48 | 28.68 | 28.00 |
| | 14 | 44.31 | 42.80 | 39.07 | 39.48 | 28.15 | 28.00 |
| | 21 | 43.90 | 42.80 | 39.68 | 39.90 | 28.53 | 28.60 |
| | 28 | 43.85 | 42.13 | 39.86 | 39.27 | 29.88 | 28.50 |
| Sept | 4 | 43.32 | 41.94 | 40.08 | 39.38 | 30.41 | 28.50 |
| | 11 | 43.73 | 41.87 | 39.68 | 39.06 | 30.41 | 28.15 |
| | 18 | 43.90 | 41.73 | 39.75 | 39.42 | 30.93 | 28.25 |
| | 25 | 43.90 | 41.83 | 39.68 | 39.48 | 31.01 | 28.80 |
| Oct | 2 | 43.73 | 41.83 | 40.62 | 40.00 | 30.86 | 29.25 |
| | 9 | 43.14 | 41.98 | 41.09 | 40.64 | 30.63 | 29.50 |
| | 16 | 44.67 | 41.87 | 42.09 | 41.03 | 30.03 | 29.85 |
| | 23 | 44.37 | 42.29 | 42.43 | 41.06 | 30.93 | 29.80 |
| | 30 | 44.26 | 42.40 | 42.83 | 41.48 | 30.41 | 29.25 |
| Nov | 6 | 44.20 | 42.71 | 43.23 | 41.69 | 30.48 | 29.75 |
| | 13 | 43.32 | 42.15 | 43.16 | 41.90 | 30.33 | 29.90 |
| | 20 | 42.79 | 41.54 | 43.70 | 41.90 | 29.65 | 29.90 |
| | 27 | 42.73 | 41.54 | 43.10 | 42.59 | 28.83 | 29.10 |
| Dec | 4 | 42.15 | 41.03 | 43.57 | 42.10 | 29.88 | 29.90 |
| | 11 | 41.03 | 39.61 | 42.83 | 41.16 | 30.41 | 29.00 |
| | 18 | 41.03 | 39.82 | 43.16 | 41.48 | 29.20 | 29.00 |
| | 24 | 40.50 | 39.50 | 44.57 | 41.48 | 29.50 | 29.00 |

# World Crude Oil Prices (a)

(Dollars per bbl.)



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(a) Internationally traded oil only. Average prices FOB weighted by estimated export volume.
Source: Department of Energy, Weekly Petroleum Status Report, April, 1982.

## Landed Costs of Crude-Oil from Selected Countries (a)

| | Algeria | Canada | Indonesia | Iran | Libya | Nigeria | Saudi Arabia | U.A. Emirates | Venezuela |
|---|---|---|---|---|---|---|---|---|---|
| 1981 (b) | $40.49 | $36.16 | $37.57 | (c) | $40.92 | $39.70 | $34.19 | NA | $29.87 |
| 1980 | 37.90 | 30.47 | 33.92 | (c) | 37.72 | 30.05 | 30.02 | NA | 25.86 |
| 1979 | 21.90 | 20.43 | 20.69 | $25.02 | 23.68 | 22.96 | 19.15 | $21.90 | 18.18 |
| 1978 | 14.91 | 14.50 | 14.64 | 13.88 | 14.72 | 14.86 | 13.92 | 14.39 | 12.83 |
| 1977 | 15.20 | 14.21 | 14.63 | 13.80 | 14.87 | 15.25 | 13.61 | 14.04 | 13.13 |
| 1976 | 13.81 | 13.57 | 13.82 | 12.82 | 13.58 | 13.80 | 13.04 | 13.30 | 11.80 |
| 1975 | 12.72 | 12.72 | 13.79 | 12.21 | 12.35 | 12.62 | 12.30 | 12.87 | 11.65 |

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(a) Does not include supplemental costs; (b) Preliminary estimates; (c) No crude has been imported from Iran since February, 1980.
Source: Department of Energy, Monthly Energy Review, March, 1982.

# International Prices for Gasoline and Fuel Oil

(U.S. dollars per gal., except resid which is U.S. dollars per 42 gal. bbl.)

| | 1/1/81 | | | | 7/31/80 | | | | 7/31/79 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Gasoline | | Fuel Oil | | Gasoline | | Fuel Oil | | Gasolines | | Fuel Oil | |
| Country | Reg. | Prem. | Dist. | Resid. | Reg. | Prem. | Dist. | Resid. | Reg. | Prem. | Dist. | Resid. |
| **WESTERN HEMISPHERE** | | | | | | | | | | | | |
| Argentina | $2.15 | $2.63 | $32.87 | $25.45 | $1.57 | $1.89 | NR | $17.32 | 114.0¢ | 137.0¢ | 56.0¢ | $13.30 |
| Bolivia | .76 | .91 | 31.91 | 25.44 | .76 | .91 | 31.91 | 25.44 | 28.0 | 65.0 | 24.0 | 8.57 |
| Brazil | 2.52 | NR | NR | 24.73 | 3.23 | NR | NR | 16.86 | 155.0 | 204.0 | — | 8.77 |
| Canada | .98 | 1.06 | 25.42 | 18.90 | .81 | .89 | 21.95 | 14.22 | 71.0 | 78.0 | — | 15.04 |
| Chile | 1.74 | 2.00 | NR | 28.64 | 1.74 | 2.22 | NR | 35.92 | 153.0 | 198.0 | 131.0 | — |
| Colombia | .86 | 1.03 | NR | 36.18 | .72 | .89 | NR | NR | 61.0 | 75.0 | 34.0 | — |
| Dominican Republic | NR | 2.39 | 39.67 | 22.82 | NR | 2.39 | 39.67 | 22.82 | — | 185.0 | — | — |
| Ecuador | .60 | .80 | NR | 11.76 | .19 | .73 | NR | 3.56 | 16.0 | 18.0 | 13.0 | 5.10 |
| El Salvador | 2.49 | 2.56 | NR | NR | NR | NR | NR | NR | 125.0 | 138.0 | — | 17.64 |
| Jamaica | 2.12 | 2.17 | 53.26 | 38.39 | 2.12 | 2.17 | NR | 27.97 | 175.0 | 179.0 | 75.0 | — |
| Mexico | .45 | 1.13 | NR | 2.45 | .46 | .66 | NR | 2.42 | 47.0 | 67.0 | 6.0 | 2.52 |
| Panama Republic | 2.04 | 2.17 | NR | NR | 1.98 | 2.11 | NR | NR | 145.0 | 156.0 | — | — |
| Paraguay | 3.61 | 4.51 | 68.77 | 55.52 | 3.00 | 3.75 | 46.62 | NR | 234.0 | 282.0 | 90.0 | — |
| Peru | .69 | .84 | 15.73 | 10.41 | .75 | .90 | 16.90 | 11.36 | 78.0 | 89.0 | 37.0 | 10.92 |
| United States | 1.24 | 1.34 | 43.93 | 31.35 | 1.22 | 1.31 | 35.28 | 20.58 | 91.0 | 97.0 | 74.0 | 17.65 |
| Uruguay | 3.31 | 4.11 | NR | 32.93 | 3.18 | 3.97 | NR | 31.61 | — | — | — | — |
| Venezuela | .13 | .31 | 2.44 | 1.68 | .13 | .31 | 2.44 | 2.44 | 13.0 | 31.0 | — | 3.18 |
| **WESTERN EUROPE** | | | | | | | | | | | | |
| Austria | 2.46 | 2.65 | 48.62 | 35.78 | 2.58 | 2.79 | NR | 29.73 | 202.0 | 222.0 | 112.0 | 20.46 |
| Belgium | 2.91 | 3.00 | 53.84 | 43.28 | 3.17 | 3.24 | 55.62 | 34.05 | 22.70 | 231.0 | — | 17.41 |
| Denmark | 3.09 | 3.13 | 43.41 | NR | 3.30 | 3.34 | NR | NR | 280.0 | 284.0 | 142.0 | — |
| Finland | 3.03 | 3.15 | 53.58 | 34.78 | 3.01 | 3.13 | 49.80 | 31.33 | 207.0 | 215.0 | — | 19.74 |
| France | 2.82 | 2.99 | 32.12 | 35.29 | 2.97 | 3.17 | NR | NR | 243.0 | 261.0 | 97.0 | — |
| Germany, West | 2.33 | 2.43 | NR | 34.33 | 2.46 | 2.57 | NR | 32.00 | 209.0 | 219.0 | 123.0 | 25.62 |
| Greece | 2.56 | 2.91 | 54.23 | 29.16 | 2.85 | 3.21 | 59.79 | 32.16 | 279.0 | 309.0 | 112.0 | — |
| Ireland | 2.50 | 2.54 | 54.05 | 38.85 | 2.73 | 2.77 | 56.60 | 36.59 | 247.0 | 252.0 | 126.0 | — |
| Italy | 3.28 | 3.38 | 32.88 | 35.98 | 3.08 | 3.15 | 35.09 | 30.27 | 244.0 | 253.0 | 94.0 | 22.67 |
| Luxembourg | 2.26 | 2.34 | 54.78 | 44.30 | 2.48 | 2.54 | 55.55 | 30.76 | — | — | — | — |
| Netherlands | 2.65 | 2.71 | 47.95 | 35.00 | 2.89 | 2.96 | 52.07 | 30.33 | 218.0 | 225.0 | 81.0 | 16.60 |
| Norway | 2.83 | 2.99 | NR | NR | 2.87 | 2.93 | NR | NR | 210.0 | 213.0 | 96.0 | 25.53 |
| Portugal | 3.25 | 3.54 | 49.00 | 25.24 | 3.13 | 3.45 | NR | 22.91 | 217.0 | 241.0 | 78.0 | 12.39 |
| Spain | 2.76 | 3.11 | NR | 36.04 | 2.81 | 3.24 | NR | 27.82 | 229.0 | 264.0 | 69.0 | 28.53 |
| Sweden | 2.75 | 2.80 | 53.59 | 47.88 | 2.64 | 2.70 | 53.17 | 40.57 | 197.0 | 204.0 | 78.0 | — |
| Switzerland | 2.56 | 2.58 | 46.03 | 38.78 | 2.79 | 2.81 | 47.70 | 31.32 | 260.0 | 262.0 | 121.0 | — |
| United Kingdom | 2.51 | 2.52 | 50.53 | 36.01 | 2.60 | 2.65 | 48.64 | 33.84 | 216.0 | 219.0 | — | 23.37 |
| Yugoslavia | 2.88 | 3.12 | 55.52 | 53.00 | 2.63 | 2.91 | 44.19 | 42.63 | 247.0 | 267.0 | 186.0 | — |
| **MIDDLE EAST** | | | | | | | | | | | | |
| Iran | 1.62 | 2.16 | 4.08 | NR | .54 | .68 | NR | NR | 54.0 | 67.0 | 13.0 | 21.42 |
| Israel | 2.92 | 3.07 | 49.10 | 31.75 | 2.49 | 2.64 | 39.91 | 26.93 | 232.0 | 248.0 | 90.0 | 20.16 |
| Lebanon | NR | NR | NR | NR | NR | 1.22 | NR | 19.74 | — | 94.0 | 41.0 | 15.46 |
| Saudi Arabia | .23 | .25 | NR | NR | .23 | .25 | NR | NR | 19.0 | 27.0 | 8.0 | — |
| **AFRICA** | | | | | | | | | | | | |
| Ethiopia | 1.38 | 1.65 | NR | NR | 1.38 | 1.65 | NR | NR | 138.0 | 165.0 | 97.0 | 23.53 |
| Ghana | 3.12 | 3.42 | 58.02 | 43.39 | 2.10 | 2.25 | NR | NR | 90.0 | 105.0 | — | — |
| Kenya | 2.34 | 2.66 | 41.92 | 33.64 | 2.45 | 2.78 | 47.02 | 35.21 | 178.0 | 194.0 | — | 20.72 |
| Morocco | 2.93 | 3.10 | NR | 29.30 | 3.45 | 3.65 | NR | 34.54 | 277.0 | 257.0 | 121.0 | 20.60 |
| South Africa, Republic of | 2.53 | 2.59 | 81.70 | 44.27 | 2.48 | 2.54 | 79.98 | 43.34 | 243.0 | 246.0 | 201.0 | — |
| Tunisia | 2.07 | 2.20 | 14.28 | 12.24 | NR | NR | NR | NR | 182.0 | 193.0 | 42.0 | — |
| **ASIA-PACIFIC** | | | | | | | | | | | | |
| Australia | 1.57 | 1.87 | 51.50 | NR | 1.51 | 1.63 | NR | NR | 134.0 | 130.0 | — | — |
| Burma | .42 | NR | NR | NR | .45 | NR | NR | NR | 145.0 | 192.0 | 32.0 | — |
| India | NR | NR | NR | NR | 2.49 | 2.57 | 44.36 | NR | 197.0 | 205.0 | 55.0 | 23.10 |
| Indonesia | .91 | 1.33 | 11.40 | 11.40 | .91 | 1.33 | 11.44 | 11.44 | 64.0 | 86.0 | — | — |
| Japan | 2.74 | 2.93 | 52.47 | 44.52 | 2.72 | 2.89 | 53.48 | 44.80 | 227.0 | 246.0 | — | 22.99 |
| Pakistan | 1.91 | 2.11 | NR | 18.96 | 1.70 | 1.99 | NR | 18.96 | — | — | — | — |
| Philippines | 2.35 | 2.45 | 37.20 | 37.20 | 2.18 | 2.28 | 35.18 | 32.63 | 106.0 | 114.0 | — | — |
| Singapore | 1.71 | 1.85 | NR | NR | 1.71 | 1.85 | NR | NR | 129.0 | 140.0 | 93.0 | — |
| Sri Lanka | NR | 1.98 | 39.47 | 31.76 | NR | 2.01 | NR | 25.44 | 152.0 | 157.0 | 54.0 | — |
| Thailand | 2.13 | 2.22 | 36.97 | 34.99 | 1.71 | 1.81 | 29.61 | 28.05 | — | — | — | — |

NR—Not Reported. Source: Energy Information Administration, 1980 International Energy Annual (issued Oct. '81). Gasoline and fuel oil prices are for the capitals of each country except the U.S., which is an average. All gasoline prices are retails, including taxes and customs duties.

## International Prices of Diesel Fuel and Household Kerosine

| | (U.S. cents per gal.) | | | |
|---|---|---|---|---|
| | Auto Diesel | | Household Kerosine | |
| Country | 1/1/81 | 7/31/80 | 1/1/81 | 7/31/81 |
| **Western Hemisphere** | | | | |
| Argentina | 78¢ | 73¢ | 158¢ | 113¢ |
| Bolivia | 61 | 61 | 14 | 14 |
| Brazil | 97 | 97 | 103 | 118 |
| Canada | 93 | 80 | 97 | 86 |
| Chile | 163 | 157 | 130 | 130 |
| Colombia | 86 | 72 | 86 | 72 |
| Dominican Republic | 97 | 97 | 79 | 79 |
| Ecuador | 44 | 30 | 24 | 13 |
| Jamaica | 135 | 135 | 118 | 116 |
| Mexico | 16 | 16 | 09 | 09 |
| Panama Republic | 126 | 122 | 116 | 112 |
| Paraguay | 174 | 144 | 210 | 180 |
| Peru | 37 | 40 | 08 | 11 |
| United States | 121 | 114 | 107 | 89 |
| Uruguay | 168 | 161 | 178 | 172 |
| Venezuela | 09 | 09 | 11 | 11 |
| **Western Europe** | | | | |
| Austria | 254 | 267 | 392 | 410 |
| Belgium | 205 | 198 | 134 | 139 |
| Denmark | 183 | 187 | 166 | 180 |
| Finland | 218 | 211 | 171 | 164 |
| France | 215 | 223 | NA | NA |
| Germany, West | 226 | 246 | NA | 56 |
| Greece | 138 | 152 | 176 | 194 |
| Ireland | 210 | 227 | NA | 172 |
| Italy | 135 | 147 | 112 | 121 |
| Luxembourg | 157 | 162 | 137 | 140 |
| Netherlands | 181 | 197 | 177 | 195 |
| Norway | 165 | 156 | 157 | 149 |
| Portugal | 159¢ | 134¢ | 159¢ | 134¢ |
| Spain | 178 | 162 | 189 | 178 |
| Sweden | 139 | 137 | 155 | 151 |
| Switzerland | 256 | 279 | NA | NA |
| United Kingdom | 256 | 272 | 138 | 137 |
| Yugoslavia | 265 | 227 | 246 | 211 |
| **Middle East** | | | | |
| Iran | 13 | 10 | 14 | 14 |
| Israel | 126 | 103 | 128 | 105 |
| Lebanon | NA | NA | NA | 67 |
| Saudi Arabia | NA | NA | NA | NA |
| Turkey | NA | 126 | NA | 125 |
| **Africa** | | | | |
| Ethiopia | 97 | 97 | NA | 119 |
| Ghana | 197 | 120 | 167 | 105 |
| Kenya | NA | NA | NA | NA |
| Morocco | 157 | 185 | 157 | 155 |
| South Africa, Rep. of | 275 | 269 | 168 | 165 |
| Tunisia | 79 | NA | 44 | NA |
| **Asia-Pacific** | | | | |
| Australia | 161 | 153 | 133 | 166 |
| Burma | 30 | 32 | 30 | 32 |
| India | NA | 111 | NA | 75 |
| Indonesia | 27 | 27 | 23 | 23 |
| Japan | 193 | 193 | 144 | 153 |
| Pakistan | 117 | 108 | 105 | 96 |
| Philippines | 139 | 122 | 139 | 122 |
| Singapore | NA | 116 | NA | 140 |
| Sri Lanka | 126 | 106 | 82 | 76 |

Source: Department of Energy, 1980 International Energy Annual.

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# Outlets Decline But At A Much Slower Rate

**The service station population** continued to decline in 1981 and the outlook is for a further slump in 1982—but the rate of decrease is much slower than most industry prognosticators had expected.

The Bureau of Industrial Economics of the U.S. Department of Commerce says the nose count dropped to 151,253 stations by the end of 1981 and that it could drop another 2.8% to 147,000 by the end of 1982. The 1981 fallout resulted in 4.6% fewer stations than projected at the end of 1980 [see table on this page].

The Bureau's track record in estimating trends in the service station population has been pretty close to reality through the years, a comparison of past surveys confirms.

This time last year, for example, the Bureau estimated the population would be around 152,000 by the end of 1981. The new projection, issued in January, differed only slightly.

This is much better, too, than another forecast in early 1981 that said the number of retail outlets in the U.S. had already dipped to 132,000.

Service stations, as defined by the latest study, "Franchising in the Economy, 1980-1982," are those which generate more than 50% of their income from the sale of petroleum products.

They do not include other thousands of outlets connected with convenience stores, mass merchandisers and in rural areas. If these are taken into consideration, a fair estimate of the total service station universe might be around 220,000, according to knowledgeable industry observers.

But while the number of stations continued to decline last year, the dollar volume per station continued to spurt into uncharted realms.

Total sales of products and services, already up 11.3% in 1981, are expected to shoot up another 12% in 1982 to an unprecedented peak of $117.8-billion. By way of comparison, 1981's total was $105.1-billion and 1980's, $94.5-billion.

(A caveat is important here, however. The Commerce Department put its numbers together in November and December of 1981 before the economic recession really got underway. The recession in 1982 could have a substantial impact on these forecasts.)

The projected slump of 2.8% for 1982 in the service station population is one of the mildest in recent years. The last percentage figure to go below this one was in 1977, when the decline was measured tentatively at 2.4%

Peak year for the service station population was in 1972 when it topped 226,000 outlets. On that basis, the 1982 projection of 147,000 stations would reflect a decline of 35% in approximately 10 years.

One reason the curve in 1981 flattened a bit could be an inverse result of the gasoline glut.

The big push had been to eliminate the 30,000 to 40,000 gal. per month service stations and concentrate on the pumpers. But with gasoline in excess supply everywhere, and national/regional refiners fighting to hold on to their gallonage ratios, there appeared to be a slowdown in the tendency to eliminate outlets for the sake of concentration and efficiency.

Gasoline decontrol occurred almost overnight in January of 1981. But many suppliers took it easy in implementing withdrawal programs they had been planning for years.

Now the fuzz is off the peach. Retrenchment is expected to be in full swing in 1982, and what this will do to the total number of outlets remains to be seen.

## Dollar Volumes Increase But Stations Go Down

| | 1982 | % Change | 1981 | % Change | 1980 |
|---|---|---|---|---|---|
| U.S. station total (a) | 147,000 | −2.8% | 151,250 | −4.6% | 158,540 |
| Company-owned | 26,460 | −2.8 | 27,225 | −4.6 | 28,537 |
| Franchisee-owned | 120,540 | −2.8 | 124,025 | −4.6 | 130,003 |
| Total sales of products and services ($000,000) | $117,762 | +12.0 | $105,145 | +11.3 | $94,470 |
| Company-owned | 21,197 | +12.0 | 18,926 | +11.3 | 17,005 |
| Franchisee-owned | 96,565 | +12.0 | 86,219 | +11.3 | 77,465 |
| Average per station | $801,000 | +15.3 | $695,000 | +16.6 | $596.000 |
| No. of employees | N.A. | | N.A. | | 570,900 |

---

(a) As of Dec. 31 of each year; (b) Service stations as defined by U.S. Census Bureau, i.e., stations with 50% or more of their income being derived from the sale of petroleum products.
Source: "Franchising in the Economy, 1980-1982," Bureau of Industrial Economics, U.S. Department of Commerce, January, 1982.

## Comparable U.S. Census Bureau Data (a)

| | 1977 | 1972* | 1967 | % Chng. '77 v. '72 | % Chng. '72 v. '67 |
|---|---|---|---|---|---|
| No. of stations (b) | 176,465 | 226,459 | 216,059 | −22.1% | +4.8% |
| Total sales ($000,000) | $56,468 | $33,655 | $22,709 | +67.8 | +48.2 |
| Average per station | $320,000 | $148,600 | $105,106 | +115.3 | +41.4 |
| No. of employees | 672,673 | 747,688 | 575,207 | −10.0 | +30.0 |

---

(a) Censuses are made every five years; (b) As above, 50% or more of their income from sale of petroleum products; *Special note, 1972 was the peak year.
Source: U.S. Department of Commerce, Censuses of Retail Trade for 1967, 1972 and 1977.
For detailed census reports on 1977, see NPN Factbook Issue, Mid-June, 1980.

## The Rise and Fall of U.S. Service Stations

| | No. of Stations (a) | | | Sales ($000,000) | | |
|---|---|---|---|---|---|---|
| Year | Total | Company-owned | Franchisee-owned | Total | Company-owned | Franchisee-owned |
| 1982 | 147,000 | 26,460 | 120,540 | $117,762 | $21,197 | $96,565 |
| 1981 | 151,250 | 27,225 | 124,025 | 105,145 | 18,926 | 89,219 |
| 1980 | 158,540 | 30,122 | 128,418 | 96,338 | 18,304 | 78,034 |
| 1979 | 164,780 | 31,310 | 133,480 | 71,894 | 13,660 | 58,234 |
| 1978 | 172,300 | 32,737 | 139,563 | 60,884 | 12,177 | 48,707 |
| 1977 | 176,465 | 33,375 | 141,160 | 58,231 | 11,646 | 46,585 |
| 1976 | 186,840 | 37,368 | 149,472 | 53,416 | 10,683 | 42,733 |
| 1975 | 189,480 | 37,896 | 151,5[illegible]4 | 47,387 | 9,477 | 37,910 |
| 1974 | 196,130 | 39,226 | 156,9[illegible]4 | 43,829 | 8,766 | 35,063 |
| 1973 | 215,880 | 47,176 | 172,70[illegible] | 37,666 | 7,533 | 30,183 |
| 1972 | 226,459 | 44,200 | 176,25[illegible] | 33,656 | 6,812 | 26,844 |
| 1971 | 220,000 | 44,000 | 176,000 | 31,149 | 6,230 | 24,919 |
| 1970 | 222,000 | 44,400 | 177,600 | 29,340 | 5,868 | 23,472 |

---

(a) As defined by U.S. Census Bureau, stations with 50% or more of their income from sales petroleum products.
Source: "Franchising in the Economy, 1980-1982," U.S. Department of Commerce, January, 1982.

# Service Station Population by States

## 1982 vs. 1977

**On state as well as the national level,** the service station population sagged an average 4.6% in 1981 and is expected to decline another 2.8% by the end of this year. But with fewer stations and the heady costs of inflation, the volume of sales dollars is continuing to mushroom upwards. A caveat, however, is that the dollar projections were made in December 1981 before the recession had deepened. This slowdown in the economy could mean that the 1982 dollar projections are a bit on the optimistic side. The NPN projections are based on Commerce Department reports.

| | Total Gasoline Service Stations | | | | Total Dollar Sales (Add 000) | | | |
|---|---|---|---|---|---|---|---|---|
| | 1982 (a) | 1981 (a) | 1980 (a) | 1977 (b) | 1982 (a) | 1981 (a) | 1980 (a) | 1977 (b) |
| Alabama | 2,966 | 3,051 | 3,198 | 3,562 | $1,700,140 | $1,517,982 | $1,363,865 | $ 810,443 |
| Alaska | 174 | 179 | 188 | 211 | 215,744 | 192,629 | 173,072 | 102,845 |
| Arizona | 1,378 | 1,418 | 1,486 | 1,656 | 1,366,971 | 1,220,510 | 1,096,595 | 651,625 |
| Arkansas | 2,004 | 2,062 | 2,161 | 2,407 | 1,039,560 | 928,197 | 833,960 | 495,560 |
| California | 11,975 | 12,320 | 12,916 | 14,388 | 12,026,008 | 10,737,508 | 9,647,357 | 5,732,696 |
| **Colorado** | 2,067 | 2,127 | 2,230 | 2,485 | 1,485,318 | 1,326,177 | 1,191,484 | 708,010 |
| **Connecticut** | 1,844 | 1,897 | 1,988 | 2,215 | 1,707,745 | 1,524,772 | 1,369,966 | 814,068 |
| **Delaware** | 363 | 373 | 391 | 435 | 338,813 | 302,512 | 271,799 | 161,511 |
| **District of Columbia** | 208 | 214 | 224 | 250 | 289,233 | 258,244 | 232,025 | 138,354 |
| **Florida** | 6,065 | 6,240 | 6,541 | 7,287 | 5,006,306 | 4,469,916 | 4,016,097 | 2,386,463 |
| Georgia | 4,216 | 4,337 | 4,546 | 5,066 | 2,186,788 | 1,952,489 | 1,754,258 | 1,350,915 |
| Hawaii | 345 | 355 | 372 | 415 | 369,376 | 329,800 | 296,316 | 176,079 |
| Idaho | 691 | 711 | 745 | 830 | 467,710 | 417,598 | 375,200 | 222,954 |
| Illinois | 6,504 | 6,691 | 7,014 | 7,815 | 6,380,638 | 5,696,998 | 5,118,597 | 3,040,967 |
| Indiana | 4,032 | 4,148 | 4,348 | 4,867 | 3,570,195 | 3,187,674 | 2,864,038 | 1,701,885 |
| **Iowa** | 2,851 | 2,933 | 3,074 | 3,424 | 2,001,446 | 1,787,005 | 1,605,575 | 954,073 |
| **Kansas** | 2,053 | 2,112 | 2,214 | 2,466 | 1,387,511 | 1,238,849 | 1,113,072 | 661,416 |
| **Kentucky** | 2,873 | 2,956 | 3,099 | 3,452 | 2,141,157 | 1,911,747 | 1,717,652 | 1,020,672 |
| **Louisiana** | 2,404 | 2,560 | 2,683 | 2,989 | 1,800,449 | 1,607,544 | 1,444,334 | 858,259 |
| **Maine** | 777 | 799 | 838 | 933 | 511,877 | 457,033 | 410,632 | 244,009 |
| Maryland | 2,050 | 2,111 | 2,213 | 2,465 | 2,538,196 | 2,266,246 | 2,036,160 | 1,209,948 |
| Massachusetts | 3,231 | 3,324 | 3,484 | 3,882 | 2,705,553 | 2,415,672 | 2,170,415 | 1,289,715 |
| Michigan | 5,470 | 5,628 | 5,899 | 6,572 | 5,435,088 | 4,852,757 | 4,360,069 | 2,590,860 |
| Minnesota | 2,730 | 2,809 | 2,944 | 3,280 | 2,483,350 | 2,217,277 | 1,992,163 | 1,193,895 |
| Mississippi | 1,633 | 1,680 | 1,761 | 1,962 | 952,688 | 850,614 | 764,253 | 454,139 |
| **Missouri** | 4,170 | 4,290 | 4,497 | 5,008 | 3,139,907 | 2,803,488 | 2,518,857 | 1,496,768 |
| **Montana** | 805 | 828 | 868 | 968 | 570,946 | 509,773 | 458,017 | 272,166 |
| **Nebraska** | 1,441 | 1,483 | 1,555 | 1,732 | 1,105,646 | 987,184 | 886,958 | 529,836 |
| **Nevada** | 534 | 549 | 575 | 641 | 617,970 | 551,759 | 495,740 | 294,582 |
| **New Hampshire** | 586 | 603 | 632 | 704 | 497,706 | 444,380 | 399,263 | 237,251 |
| New Jersey | 4,453 | 4,581 | 4,802 | 5,350 | 3,783,618 | 3,378,230 | 3,035,247 | 1,803,619 |
| New Mexico | 1,157 | 1,190 | 1,247 | 1,389 | 768,497 | 686,158 | 616,494 | 366,336 |
| New York | 7,695 | 7,917 | 8,298 | 9,245 | 6,070,804 | 5,420,361 | 4,870,046 | 2,893,091 |
| North Carolina | 4,808 | 4,946 | 5,185 | 5,775 | 2,853,229 | 2,547,526 | 2,288,882 | 1,360,111 |
| North Dakota | 573 | 589 | 617 | 687 | 422,712 | 377,421 | 339,102 | 201,503 |
| **Ohio** | 7,341 | 7,552 | 7,916 | 8,820 | 6,538,380 | 5,837,839 | 5,245,138 | 3,116,790 |
| **Oklahoma** | 2,549 | 2,622 | 2,748 | 3,063 | 1,374,691 | 1,227,403 | 1,102,788 | 655,239 |
| **Oregon** | 1,820 | 1,872 | 1,962 | 2,185 | 1,373,609 | 1,226,437 | 1,101,920 | 654,788 |
| **Pennsylvania** | 7,486 | 7,702 | 8,073 | 8,994 | 5,993,347 | 5,351,203 | 4,807,909 | 2,856,978 |
| **Rhode Island** | 579 | 596 | 625 | 697 | 454,101 | 405,447 | 364,283 | 216,467 |
| South Carolina | 2,498 | 2,570 | 2,694 | 3,001 | 1,514,007 | 1,351,792 | 1,214,548 | 721,715 |
| South Dakota | 715 | 736 | 772 | 861 | 505,071 | 450,956 | 405,172 | 240,764 |
| Tennessee | 3,404 | 3,502 | 3,671 | 4,090 | 2,414,045 | 2,155,397 | 1,936,565 | 1,150,756 |
| Texas | 10,610 | 10,916 | 11,442 | 12,747 | 7,225,495 | 6,451,335 | 5,796,348 | 3,444,333 |
| Utah | 956 | 984 | 1,031 | 1,149 | 770,150 | 687,634 | 617,820 | 367,125 |
| **Vermont** | 449 | 462 | 484 | 540 | 292,744 | 261,379 | 234,842 | 139,550 |
| **Virginia** | 3,322 | 3,418 | 3,583 | 3,992 | 3,107,116 | 2,774,211 | 2,492,553 | 1,481,137 |
| **Washington** | 2,500 | 2,572 | 2,696 | 3,005 | 1,986,600 | 1,773,750 | 1,593,666 | 946,996 |
| **West Virginia** | 1,513 | 1,557 | 1,632 | 1,818 | 1,035,008 | 924,114 | 830,291 | 493,332 |
| **Wisconsin** | 3,365 | 3,462 | 3,629 | 4,043 | 2,622,666 | 2,341,666 | 2,103,923 | 1,250,204 |
| **Wyoming** | 538 | 553 | 580 | 647 | 449,884 | 401,682 | 360,900 | 214,456 |
| **Total** | **146,967** | **151,200** | **158,491** | **176,465** | **$118,458,486** | **$105,766,505** | **$95,028,307** | **$56,468,144** |

(a) Projections by NPN based on Census data and other Commerce Department reports; (b) U.S. Census Bureau Retail Trades census, 1977.
Source: NPN projections based on Commerce Department data.

# U.S. Service Stations By Types, 1981

**Split islands appeared to** have dominated gasoline marketing in 1981, according to the latest informal survey of oil marketers—majors, independents, jobbers, small retailers, and a handful of convenience store chains as well.

This seems to reflect the stiffening street competition for gallonage in the face of declining consumption and the economic recession that bit into pocketbooks last year. If, for example, it could be assumed that one-half of the split islands were self-service—say, 29,500—that, plus the acknowledged number of self-service stations would boost the self-service total to 60,000 outlets—about one-third of the retail industry.

The 1981 survey was bobtailed from nine to seven categories to eliminate what seemed to be excessive duplication in some of the earlier replies.

It should be borne in mind that the percentages and totals on this page are only *benchmark estimates rather than hard data* culled from documented research.

The data are obtained from NPN questionnaries which are mailed in the forepart of the year. About 400 replies are received, of which about 40% or so include data on the number of outlets they own or supply.

These statistics are weighted then averaged against known industry totals for a profile of basic gasoline operations.

It also should be borne in mind that this year's data are not comparable to those of the preceding years because the population base changes annually, and respondents are not always the same.

Another factor to be considered is that suppliers, jobbers, and retailers often use different terminology and classifications within the framework of their own companies.

The base numbers in this year's profile use a 1981 service-station population, as defined by the U.S. Census Bureau, of 151,250, with another 17,000 thrown in to account for convenience stores with gasoline operations.

## Where Gasoline Was Sold (1981)

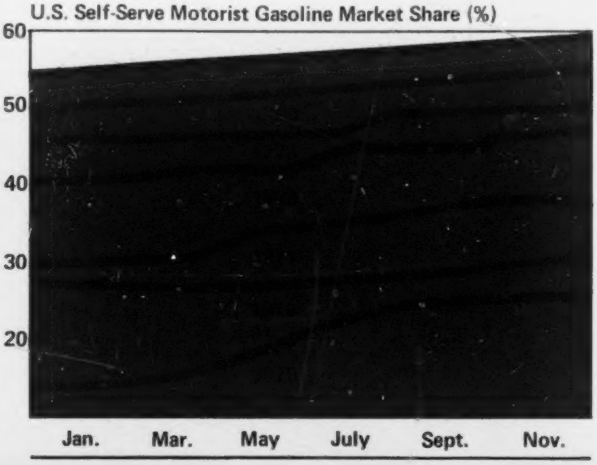
| Type of Outlet | Weighted Number (a) | Weighted Percentage (a) |
|---|---|---|
| Split Islands | 59,392 | 35.3% |
| Full Service | 44,754 | 26.6 |
| Self Service | 29,948 | 17.8 |
| Convenience Stores | 17,500 | 13.2 |
| Car Care | 6,898 | 4.1 |
| Car Washes | 3,701 | 2.2 |
| Truck Stops | 1,514 | 0.9 |
| **Total** | **163,707 (b)** | **100.1%** |

(a) Weighted averages were obtained from NPN questionnaires and were extrapolated to reflect the industry as a whole based on 1981 population trends; (b) This total includes 151,250 service stations, as defined by the U.S. Census Bureau, and an estimated 17,000 convenience stores selling gasoline in 1981. See Retail Market section for service and C-store population counts.

Source: NPN questionnaires.

# How Self-Service Appeals to Motorists

**Self-service gasoline** marketing's appeal to motorists is still on the upside, according to the internal report of a major oil company. Its finding in January 1982 indicated the total of motorists preferring self-service is now at the 60% mark—six out of every 10 drivers. This is another increase of 5% or so for the second year in a row. Only two states—Oregon and New Jersey—still ban self-service gasoline marketing.


U.S. Self-Serve Motorist Gasoline Market Share (%)

| State | % of Buyers |
|---|---|
| Utah | 83% |
| Arizona | 81 |
| Colorado | 79 |
| New Mexico | 78 |
| South Carolina | 76 |
| Texas | 74 |
| Wisconsin | 74 |
| Nevada | 73 |
| North Carolina | 73 |
| Idaho | 72 |
| Wyoming | 71 |
| California | 70 |
| Oklahoma | 70 |
| Montana | 69 |
| Tennessee | 69 |
| Washington | 69 |
| Florida | 68 |
| Louisiana | 67 |
| Missouri | 66 |
| Virginia | 65 |
| Arkansas | 64 |
| Michigan | 64 |
| Georgia | 63 |
| Illinois | 63 |
| Indiana | 63 |
| Iowa | 63 |
| Alabama | 61 |
| South Dakota | 61 |
| Mississippi | 60 |
| Dist. of Columbia | 59 |
| Minnesota | 59 |
| Maryland | 58 |
| Delaware | 55 |
| Kansas | 55 |
| Nebraska | 55 |
| North Dakota | 55 |
| Kentucky | 54 |
| Ohio | 54 |
| Connecticut | 47 |
| West Virginia | 45 |
| Rhode Island | 44 |
| New Hampshire | 37 |
| New York | 37 |
| Pennsylvania | 36 |
| Massachusetts | 30 |
| Maine | 28 |
| Vermont | 23 |

Source: Amoco Oil Co.

# Business at Service Stations

## Dollar Volume

| Year | No. of service stations | Total sales (add $000,000,000) | Avg. per station (add $000) |
|---|---|---|---|
| **1982** | **147,000 (a)** | **$117.7** | **$800.6** |
| 1981 | 151,250 (a) | 105.1 | 695.0 |
| 1980 | 158,540 (a) | 96.3 | 608.0 |
| 1979 | 164,790 (a) | 70.9 | 430.0 |
| 1978 | 172,300 (a) | 60.9 | 353.0 |
| 1977 | 176,465 (b) | 56.5 | 320.0 |
| 1976 | 186,400 (a) | 48.0 | 257.0 |
| 1975 | 189,480 (a) | 43,8 | 232.0 |
| 1972 | 226,459 (b) | 33.7 | 148.8 |

---

(a) Franchise in the Economy 1980-82, U.S. Department of Commerce; date are as of the end of the year.

(b) Bureau of Census; by its definition of gasoline service stations, 50% or more of dollar volume comes from the sale of petroleum products.

## Product Sales, Passenger Cars

| | | Gasoline | | Motor oil | |
|---|---|---|---|---|---|
| Year | Privately owned passenger cars (add 000) | Avg. gal. per car | Annual retail market (add 000,000 gal.) | Avg. qt. per year | Annual retail market (add 000,000 qt.) |
| **1982** | **126.000** | **610** | **76,860** | **7.3** | **900** |
| 1981 | 124,341 | 620 | 77.091 | 7.3 | 900 |
| 1980 | 121,723 | 638 | 77,659 | 7.3 | 907 |
| 1979 | 120,248 | 664 | 79,845 | 7.3 | 880 |
| 1978 | 116,534 | 715 | 83,760 | 7.6 | 921 |
| 1977 | 113,696 | 706 | 80,269 | 7.9 | 900 |
| 1976 | 110,188 | 711 | 78,344 | 8.0 | 887 |
| 1975 | 106,712 | 712 | 75,979 | 9.5 | 1,014 |
| 1972 | 96,567 | 755 | 72,908 | 10.0 | 966 |

---

Source: Federal Highway Administration through 1980: NPN estimates for 1981 and 1982 and for motor oil.

# Station Customers

| | | Privately owned passenger cars | | Households owning cars | | Licensed drivers | | Women drivers | |
|---|---|---|---|---|---|---|---|---|---|
| Year | No. of service stations | Total (add 000) | Avg. per station | Total (add 000,000) | Avg. per station | Total (add 000,000) | Avg. per station | Total (add 000,000) | Avg. per station |
| **1982** | **147,000 (a)** | **126.000** | **857.1** | **72.0** | **489.8** | **149.0** | **1,013.6** | **70.0** | **476.2** |
| 1981 | 151,250 (a) | 124.341 | 822.0 | 70.0 | 460.5 | 147.3 | 969.0 | 68.8 | 452.6 |
| 1980 | 158,540 (a) | 121.723 | 767.8 | 67.2 | 423.8 | 145.3 | 916.7 | 68.1 | 429.5 |
| 1979 | 164,790 (a) | 120,248 | 731.1 | 65.9 | 400.0 | 143.3 | 868.3 | 66.8 | 403.5 |
| 1978 | 172,300 (a) | 116,534 | 676.3 | 64.6 | 375.0 | 140.8 | 817.1 | 65.3 | 379.0 |
| 1977 | 176,465 (a) | 113,696 | 644.3 | 63.3 | 365.5 | 138.4 | 784.4 | 63.7 | 361.0 |
| 1976 | 186,400 (a) | 110,188 | 591.1 | 62.0 | 332.6 | 130.3 | 689.4 | 57.9 | 306.3 |
| 1975 | 189,480 (a) | 106,712 | 563.2 | 60.5 | 319.3 | 127.8 | 662.2 | 56.8 | 294.3 |
| 1972 | 226,459 (b) | 96,567 | 426.4 | 52.8 | 232.2 | 118.4 | 522.8 | 52.6 | 232.3 |

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(a) Franchising in the Economy 1980-82, Department of Commerce.

(b) Bureau of Census; by its definition of gasoline service stations, 50% or more of dollar volume comes from the sale of petroleum products.

Source: Based on data from Motor Vehicle Mfgs. Assn., Federal Highway Administration, and NPN estimates for 1981 and 1982.

# How Stations Rank in Sales

| | 1981 | %Change '81-'80 | 1980 | %Change '80-'79 | 1979 | %Change '79-'78 | 1978 | %Change '78-'77 |
|---|---|---|---|---|---|---|---|---|
| All Retail Stores | $1,045.7 | 9.3% | $956.7 | 7.0% | $894.3 | 12.0% | $798.8 | 10.3% |
| Food Group | 238.3 | 9.6% | 217.5 | 11.1 | 195.8 | 12.2 | 174.5 | 10.1 |
| Automotive Group | 187.4 | 12.2 | 167.0 | (5.8) | 177.3 | 8.3 | 163.7 | 10.3 |
| General Merchandise | 126.6 | 8.9 | 116.3 | 6.0 | 109.7 | 10.3 | 99.5 | 10.4 |
| Eating and Drinking Place | 95.3 | 10.0 | 86.6 | 8.8 | 79.6 | 8.4 | 70.1 | 10.2 |
| Gasoline Service Stations | 103.0 | 9.0 | 94.5 | 29.1 | 73.2 | 20.2 | 60.9 | 4.6 |
| Apparel Group | 47.6 | 7.0 | 44.5 | 5.0 | 42.4 | 12.2 | 37.8 | 10.2 |

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Source: Survey of Current Business, Department of Commerce, Vol. 62, No. 1, January, 1982.

# Personal Consumption Expenditures

| | (Billions of Dollars) | | | | | Seasonally Adjusted at Annual Rate—1981 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1981 | %Change '81-'80 | 1981 | %Change '80-'79 | 1979 | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. |
| Total Expenditures | $1,858.1 | 11.1% | $1,672.8 | 10.7% | $1,510.9 | $1,810.1 | $1,829.1 | $1,883.9 | $1,909.5 |
| Durable Goods | 232.0 | 9.5 | 211.9 | (0.2) | 212.3 | 238.3 | 227.3 | 236.2 | 226.4 |
| Automobiles | 98.2 | 9.2 | 89.9 | (5.9) | 95.5 | 105.4 | 93.4 | 101.6 | 92.3 |
| Furniture | 92.7 | 9.6 | 84.6 | 4.3 | 81.1 | 92.3 | 92.4 | 93.2 | 93.0 |
| Other Durable | 41.2 | 10.5 | 37.0 | 4.2 | 35.8 | 40.6 | 41.6 | 41.4 | 41.1 |
| Nondurable Goods | 743.4 | 10.0 | 675.7 | 2.2 | 602.2 | 726.0 | 735.3 | 751.3 | 760.9 |
| Food | 382.1 | 10.5 | 345.7 | 10.8 | 312.1 | 372.5 | 377.8 | 386.5 | 391.6 |
| Clothing and Shoes | 115.9 | 10.6 | 104.8 | 6.8 | 98.9 | 113.4 | 115.8 | 117.5 | 116.8 |
| Gasoline and Oil | 94.5 | 6.2 | 89.0 | 30.1 | 68.4 | 93.5 | 92.4 | 95.1 | 97.1 |
| Fuel Oil and Coal | 21.0 | 6.1 | 19.8 | 2.4 | 16.0 | 20.5 | 21.0 | 21.3 | 21.0 |
| Other Nondurable | 150.9 | 10.8 | 136.2 | 10.8 | 122.9 | 146.6 | 149.4 | 152.1 | 155.5 |
| Services | 882.7 | 12.4 | 785.2 | 12.8 | 696.3 | 845.8 | 866.5 | 896.4 | 922.2 |

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Source: Survey of Current Business, Department of Commerce, Vol. 62, No. 1, January, 1982.

# Average Annual Yields from 1 bbl. of Crude Oil

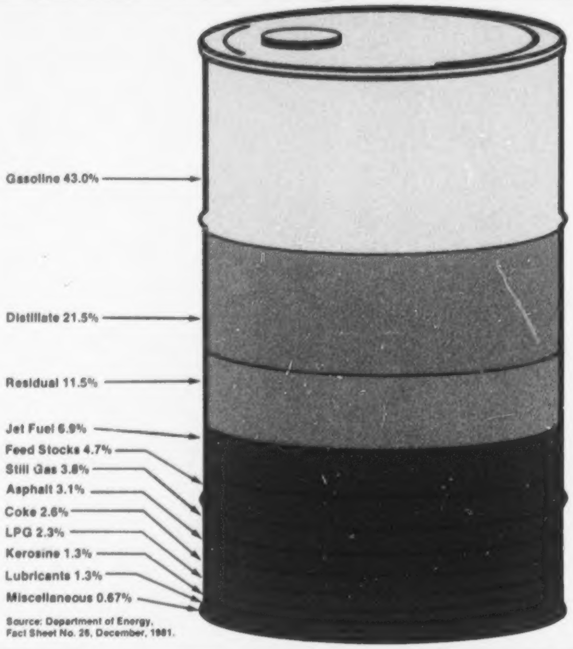
**In looking at this** annual yield pattern, it must be remembered that some refineries can maximize gasoline production (as high as 60%) and some can maximize fuel oils (as high as 50%), thus varying their output extensively. Data used in this concept are from 1979 averages, as compiled by Department of Energy.

Here are the yields for a standard 42-gal. bbl.:

| Product | Gallons | Product | Gallons |
|---|---|---|---|
| Gasoline | 18.06 | Asphalt | 1.30 |
| Distillate | 9.03 | Coke | 1.09 |
| Residual | 4.83 | LP-Gas | 0.97 |
| Jet Fuel | 2.90 | Kerosine | 0.55 |
| Feedstocks | 1.97 | Lubricants | 0.55 |
| Still Gas | 1.60 | Miscellaneous | 0.67 |

*(These yields total 43.52 gal. but are balanced out by the fact that 1.52 gal. of hydrogen are added during the refining processes.)*

Legend has it that the 42-gal. bbl. dates back to the 15th century when King Edward IV of Norway standardized the herring barrel at 42 gal. Subsequently this became a standard for whiskey barrels in the U.S. The oil barrel was modeled after that in 1866 for all U.S. shipments. Canada uses an imperial gallon which is larger than the U.S. variety while overseas most countries use the metric system for weights and measures.



Source: Department of Energy,
Fact Sheet No. 26, December, 1981.

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# Credit-Card Sales Boom Continues

**More than 68-million people** carried oil-company credit cards in 1979, and charged more than $21.4-billion worth of gasoline and other oil-company products and services to them. The total number of cardholders was down somewhat in 1979 vis a vis 1978, but the charge volume was up a spanking 19%, according to *The Nilson Report*, a privately-published newsletter for credit-card executives. Nilson, a Los Angeles-based firm, predicted that by 1985 the number of people carrying oil-company credit cards would jump 58% to 107-million. The total charge volume will rise at the same time to $54.1-billion, with the average monthly statement running around $112.78.

The projections below are the most recent available. These were made by *The Nilson Report* in the summer of 1980—long before President Reagan swept into office and decontrolled the gasoline market. One result was that Nilson made no oil-company credit-card report for the year 1980.

He had planned to issue a 1981 update in the forepart of 1982 but various traumatic changes, such as the imposition of service charges by a number of oil companies, and the withdrawl by Atlantic Richfield from credit operations entirely, made such a mish-mash out of available data that Nilson deferred its 1981 projections until next fall of 1982.

## 22 Largest Oil-Company Credit-Card Issuers in the U.S.—1979*

| | Oil Company Credit-Card Sales | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Total Cards (millions) | Total Accounts (millions) | Accounts Billed Monthly (millions) | Volume on Company Cards ($millions) | Bank-Card Sales ($millions) | T & E Card Sales ($millions) | Total Credit Sales ($millions) | Branded Retail Outlets (locations)(a) |
| Texaco (b) ....... | 17.70 | 8.50 | 4.80 | $ 3,061 | - | - | $ 3,061 | 25,631 |
| Exxon .......... | 11.70 | 6.50 | 4.00 | 2,400 | - | - | 2,400 | 23,672 |
| Amoco ......... | 11.02 | 6.50 | 3.40 | 2,400 | - | - | 2,400 | 21,251 |
| Gulf ............ | 11.01 | 5.20 | 2.30 | 1,500 | - | - | 1,500 | 17,003 |
| Mobil .......... | 10.90 | 5.50 | 3.00 | 1,840 | - | - | 1,840 | 17,747 |
| Shell ........... | 10.50 | 6.00 | 3.50 | 1,900 | $220 | - | 2,120 | 17,137 |
| Chevron ........ | 8.10 | 4.50 | 2.70 | 1,700 | 350 | - | 2,056 | 14,689 |
| Atlantic Richfield | 6.85 | 3.60 | 1.95 | 1,100 | - | - | 1,100 | 8,312 |
| Union .......... | 6.20 | 3.40 | 1.85 | 1,700 | 240 | - | 1,940 | 12,197 |
| Sunoco ......... | 5.40 | 5.00 | 1.00 | 500 | 100 | $25 | 675 | 10,784 |
| Phillips ......... | 5.00 | 2.80 | 1.00 | 670 | 100 | 6 | 776 | 10,080 |
| Sohio .......... | 2.82 | 1.49 | .80 | 660 | - | - | 660 | 4,410 |
| Conoco ......... | 1.95 | 1.20 | .40 | 185 | - | - | 185 | 4,341 |
| Citgo (b) ........ | 1.80 | .82 | .44 | 210 | 110 | - | 320 | 5,178 |
| Getty ........... | 1.45 | .78 | .40 | 190 | 100 | 18 | 308 | 5,038 |
| Marathon ....... | 1.00 | .60 | .18 | 136 | - | - | 136 | 1,851 |
| Amer. Petrofina | .78 | .44 | .18 | 130 | 65 | - | 195 | 4,144 |
| Diamond Shamrock (b) | .77 | .49 | .19 | 120 | 24 | 9 | 153 | 1,454 |
| Kerr-McGee (b) ... | .50 | .21 | .09 | 73 | 15 | - | 88 | 1,595 |
| Clark ........... | .25 | .13 | .08 | 60 | - | - | 60 | 1,800 |
| Ashland ........ | .18 | .09 | .05 | 35 | 45 | - | 80 | 2,125 |
| Tenneco ........ | .12 | .05 | .02 | 30 | - | - | 30 | 489 |
| Others ......... | 3.00 | 1.60 | .90 | 800 | 125 | 25 | 950 | 8,000 |
| **Totals** ........ | **119.00** | **65.40** | **32.23** | **$21,400** | **$1,494** | **$83** | **$23,033** | **218,928** |

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(a) Number of outlets includes hotels, airports, garages, mass merchandisers and other places where gasoline can be purchased;
(b) Estimates not verified. *1980 data. See caveat in copy at the top of this page.

## Oil-Company Credit-Card Trends—1980-1985 (a)

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 |
|---|---|---|---|---|---|---|
| **Cardholders** | | | | | | |
| People owning cards ......... | 68.7 | 78.7 | 96.4 | 100.0 | 103.6 | 107.1 |
| **Cards** | | | | | | |
| Total (millions) .............. | 110.0 | 118.0 | 135.0 | 140.0 | 145.0 | 150.0 |
| Avg. per person ............. | 1.6 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 |
| **Transactions** | | | | | | |
| Total annually (billions) ....... | 1.5 | 1.7 | 1.8 | 1.8 | 1.8 | 2.0 |
| Avg. gallons per sale ......... | 11.7 | 11.2 | 10.5 | 10.0 | 9.6 | 9.0 |
| Avg. price per gallon ......... | $1.35 | $1.65 | $2.00 | $2.50 | $2.85 | $3.05 |
| Avg. sale (transaction) ........ | $15.80 | $18.48 | $21.00 | $25.00 | $27.36 | $27.45 |
| **Charge Volume** | | | | | | |
| Total annually ($billions) ...... | $23.9 | $30.8 | $37.0 | $44.4 | $50.6 | $54.1 |
| Avg. monthly statement ...... | $49.72 | $68.79 | $77.04 | $92.45 | $105.38 | $112.78 |
| **Pump Locations** | | | | | | |
| Total outlets ................ | 212,000 | 196,000 | 190,000 | 185,000 | 180,000 | 170,000 |

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(a) 1980 Projection, the most recent available. Note caveat in copy above.
Source: The Nilson Report, July, 1980.

# C-Stores Continue Their Expansion in Gasoline Marketing

**Although the pace** is a bit slower than the hectic years of the early '70s, gasoline marketing continues to be impressive in the C-store industry.

This is confirmed by the latest pair of reports on gasoline and groceries from private industry and government sources.

The independent study, the 11th annual "Dollars Per Day Survey of the Small Food Industry," indicates that C-stores sold about 5.3% of all of the gasoline marketed in 1980.

Industry sources believe that the C-stores did a bit better than that in 1981 because of the intensity of their competition, even in a declining marketplace.

The table at the right indicates that the number of C-stores with gasoline facilities dipped slightly in 1980. But that was mostly because John F. Roscoe, of Walnut Creek, Calif., dropped UtoteM from his 1980 survey. If Utotem's numbers are factored in, then the 1980 total would be 6,073 stores, or an increase of 7.9% over 1979—not a 1.7% decrease as the new tabulation shows.

Roscoe's survey covers only about a third of the C-store industry. It concentrates only on the 12 chains that are publicly owned.

No hard figures are available but industry sources believe the C-store universe consists of about 35,000 to 40,000 stores. If Roscoe's percentages are applied against that universe, it could mean that as many as 15,500 to 17,500 C-stores are marketing gasoline.

By sheer size, Southland is the biggest gasoline vendor in the C-store industry. Of its 6,895 stores in 1980, 2,246 sold gasoline, or 33% of Southland's units.

Percentagewise, Hop-In and Sunshine Jr. fared better, however. Of Hop-In's 152 stores, 84% sold gasoline. Of Sunshine's 353 outlets, 82% marketed gasoline.

Roscoe notes that the 12 chains in his survey accounted for about 1.9-billion gal. of gasoline sales in 1980. With the same extrapolation as mentioned above, this would give the C-store industry a volume of about 5.8-billion gal., in terms of the study. The national market in 1980 was about 109-billion gal.

Roscoe says the average margin for gasoline in the C-store chain in 1980 was 6¢ gal.

### Government Data

The federal report on C-stores deals only with franchise operations.

Thus the population it discusses accounts for 16,000 to 17,000 stores—considerably less than half of the presumed total population of 39,000.

The figures are meaningful, however, because they isolate and identify trends.

This report is prepared by the U.S. Commerce Department's Bureau of Industrial Economics. The current one is entitled, "Franchising in the Economy 1980-1982."

The accompanying tables are self-explanatory though it should be borne in mind that the Dollars Per Day study involves only 12 chains and the Commerce Department report considers only franchise operations. The numbers therefore are not comparable and must be viewed as trends only.

## Growth of Gasoline Units in 1981

| $ Per Day Profit Ranking | No. of Stores | No. of Gasoline Units | % of Stores with Gasoline | No. of Gasoline Units Added During Year | No. of Stores Added During Year |
|---|---|---|---|---|---|
| 1. Shop & Go | 412 | 265 | 64% | 40 | 31 |
| 2. Circle K | 1,194 | 753 | 63% | 27 | -6 |
| 3. National Convenience | 832 | 478 | 57% | 32 | 15 |
| 4. Southland | 6,895 | 2,246 | 33% | 139 | 90 |
| 5. Lil' Champ | 148 | 44 | 30% | 12 | 10 |
| 6. Dillon | 338 | 242 | 72% | 42 | 14 |
| 7. Mini Mart | 112 | 29 | 26% | 18 | -3 |
| 8. Conna | 416 | 314 | 75% | 66 | 80 |
| 9. Sunshine Jr. | 353 | 288 | 82% | 28 | 17 |
| 10. Li'l General | 474 | 204 | 43% | 37 | 10 |
| 11. Hop-In | 152 | 127 | 84% | 13 | 12 |
| 12. Munford | 1,119 | 543 | 49% | -12 | -65 |
| **Totals** | **12,445** | **5,533** | **44.45%** | **+442** | **+205** |

## Eight Year Box Score on Growth

| Survey Year | No. of Stores | No. of Stores with 'Gas' Units | % Change | No. of 'Gas' Units Added During Year | No. of Stores with 'Gas' |
|---|---|---|---|---|---|
| 1981 (a) | 12,445 | 5,533 | -1.7% | 442 | 44.45% |
| 1980 | 13,167 | 5,630 | 9.3 | 447 | 42.76 |
| 1979 | 12,920 | 5,153 | 12.4 | 569 | 39.88 |
| 1978 | 12,597 | 4,584 | 20.8 | 792 | 36.38 |
| 1977 | 11,953 | 3,792 | 36.1 | 959 | 31.72 |
| 1976 | 11,356 | 2,786 | 29.7 | 557 | 24.53 |
| 1975 | 10,143 | 2,147 | 9.3 | 194 | 21.16 |
| 1974 | 9,258 | 1,964 | — | — | 21.21 |

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(a) Decrease reflects fact UtoteM was dropped from 1981 survey. UtoteM closed out the year with 931 stores, of which 540, or 58%, had gasoline pumps. If these numbers were factored in the 1981 totals there would be 6,073 stores with gasoline facilities, or an increase of 7.9%

Source: John F. Roscoe, Eleventh Annual Dollars Per Day Survey, Copyrighted by John F. Roscoe.

## Government Franchise Projections

| Item | 1982 (a) | 1981 (a) | 1980 |
|---|---|---|---|
| Total number of establishments | 17,312 | 16,255 | 15,614 |
| Company-owned | 10,076 | 9,694 | 9,679 |
| Franchisee-owned | 7,236 | 6,561 | 5,935 |
| Total sales of products and services (Add $000) | $9,052,060 | $8,653,224 | $7,821,186 |
| Company-owned | 5,557,297 | 5,087,539 | 4,722,845 |
| Franchisee-owned | 3,494,763 | 3,565,685 | 3,098,341 |
| Average sales per establishment | $523,000 | $532,000 | $501,000 |
| Company-owned | 552,000 | 525,000 | 488,000 |
| Franchisee-owned | 483,000 | 543,000 | 522,000 |

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(a) Data estimated by respondents.

## Distribution by Establishments (1980)

| Size Groups | Franchising Companies Number | Establishments Number | Establishments Per Cent | Sales ($000) | Sales Per Cent |
|---|---|---|---|---|---|
| **Total** | **28** | **15,614** | **100.0%** | **$7,821,186** | **100.0%** |
| 1,001 and greater | 4 | 10,084 | 64.6 | 5,560,592 | 71.6 |
| 500 to 1,000 | 3 | 2,283 | 14.6 | 169,518 | 11.3 |
| 151 to 500 | 8 | 2,646 | 16.9 | 1,108,836 | 14.2 |
| 51 to 150 | 7 | 499 | 3.2 | 884,580 | 2.2 |
| 11 to 50<br>0 - 10 | 6 | 102 | 0.7 | 57,660 | 0.7 |

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Source: "Franchising in the Economy, 1980-1982," Bureau of Economics, U.S. Department of Commerce, January, 1982.

## Convenience Store Population—1980

| | | Population | No. of households | No. of convenience stores | Total Store Sales | |
|---|---|---|---|---|---|---|
| | | | | | Gasoline | In-store |
| **New England** | | **12,348,493** | **4,361,987** | **1,678** | **$ 239,858** | **$ 590,582** |
| | Maine | 1,124,660 | 395,184 | 118 | 33,429 | 42,447 |
| | New Hampshire | 920,610 | 323,493 | 95 | 26,825 | 35,189 |
| | Vermont | 511,456 | 178,325 | 31 | 8,667 | 9,256 |
| | Massachusetts | 5,737,037 | 2,032,717 | 918 | 88,397 | 346,747 |
| | Rhode Island | 947,154 | 338,590 | 130 | 25,175 | 36,530 |
| | Connecticut | 3,107,576 | 1,093,678 | 386 | 57,365 | 120,413 |
| **Mid-Atlantic** | | **36,788,174** | **13,108,507** | **3,515** | **321,945** | **1,448,994** |
| | New York | 17,557,288 | 6,339,762 | 929 | 125,619 | 383,889 |
| | New Jersey | 7,364,158 | 2,548,225 | 1,092 | 29,501 | 525,324 |
| | Pennsylvania | 11,866,728 | 4,220,520 | 1,494 | 166,825 | 539,781 |
| **East North Central** | | **41,669,738** | **14,650,797** | **4,298** | **586,826** | **1,610,867** |
| | Ohio | 10,797,419 | 3,833,706 | 1,894 | 126,016 | 735,291 |
| | Indiana | 5,490,179 | 1,926,978 | 509 | 135,778 | 150,897 |
| | Illinois | 11,418,461 | 4,042,744 | 737 | 114,825 | 327,668 |
| | Michigan | 9,258,344 | 3,195,015 | 743 | 88,048 | 292,641 |
| | Wisconsin | 4,705,335 | 1,652,354 | 415 | 122,159 | 104,370 |
| **West North Central** | | **17,184,066** | **6,205,656** | **2,242** | **497,762** | **723,366** |
| | Minnesota | 4,077,148 | 1,445,616 | 622 | 110,603 | 194,213 |
| | Iowa | 2,918,387 | 1,052,847 | 396 | 116,381 | 79,646 |
| | Missouri | 4,917,444 | 1,793,720 | 572 | 85,476 | 227,227 |
| | North Dakota | 652,695 | 227,657 | 38 | 5,778 | 8,692 |
| | South Dakota | 690,178 | 242,357 | 73 | 19,397 | 28,711 |
| | Nebraska | 1,570,006 | 571,411 | 157 | 47,048 | 42,980 |
| | Kansas | 2,363,208 | 872,048 | 384 | 113,079 | 141,897 |
| **South Atlantic** | | **36,943,139** | **13,153,984** | **9,032** | **1,999,898** | **2,508,642** |
| | Delaware | 595,225 | 207,429 | 101 | 12,381 | 36,631 |
| | Maryland | 4,216,446 | 1,460,635 | 550 | 29,762 | 265,660 |
| | District of Columbia | 637,651 | 252,952 | 101 | 5,245 | 43,086 |
| | Virginia | 5,346,279 | 1,862,854 | 1,119 | 145,682 | 458,414 |
| | West Virginia | 1,949,644 | 686,311 | 275 | 85,333 | 96,209 |
| | North Carolina | 5,874,429 | 2,040,562 | 1,326 | 435,634 | 275,348 |
| | South Carolina | 3,119,208 | 1,029,796 | 788 | 230,603 | 153,381 |
| | Georgia | 5,464,265 | 1,872,089 | 1,313 | 316,524 | 285,976 |
| | Florida | 9,739,992 | 3,741,356 | 3,459 | 738,734 | 893,937 |
| **East South Central** | | **14,662,882** | **5,050,397** | **3,117** | **837,825** | **799,758** |
| | Kentucky | 3,661,433 | 1,263,565 | 677 | 200,619 | 219,905 |
| | Tennessee | 4,590,750 | 1,618,361 | 1,020 | 288,063 | 300,799 |
| | Alabama | 3,890,061 | 1,341,302 | 851 | 221,619 | 174,864 |
| | Mississippi | 2,520,638 | 827,169 | 569 | 127,524 | 104,190 |
| **West South Central** | | **23,743,134** | **8,274,274** | **6,166** | **1,342,505** | **2,246,994** |
| | Arkansas | 2,285,513 | 815,664 | 333 | 88,730 | 68,817 |
| | Louisiana | 4,203,972 | 1,411,113 | 734 | 182,825 | 209,087 |
| | Oklahoma | 3,025,266 | 1,118,532 | 902 | 259,587 | 240,232 |
| | Texas | 14,228,383 | 4,928,965 | 4,197 | 811,363 | 1,728,858 |
| **Mountain** | | **11,368,330** | **3,984,616** | **2,315** | **295,620** | **934,936** |
| | Montana | 786,690 | 283,742 | 129 | 37,556 | 39,599 |
| | Idaho | 943,935 | 324,107 | 135 | 20,333 | 57,133 |
| | Wyoming | 470,816 | 166,049 | 74 | 18,571 | 22,173 |
| | Colorado | 2,888,834 | 1,060,822 | 536 | 55,762 | 237,406 |
| | New Mexico | 1,299,968 | 440,575 | 319 | 45,032 | 118,803 |
| | Arizona | 2,717,866 | 956,717 | 826 | 80,524 | 338,383 |
| | Utah | 1,461,037 | 448,603 | 147 | 21,810 | 55,860 |
| | Nevada | 799,184 | 304,001 | 149 | 16,032 | 65,579 |
| **Pacific** | | **31,796,869** | **11,586,391** | **3,437** | **377,761** | **1,535,861** |
| | Washington | 4,130,163 | 1,539,681 | 483 | 63,651 | 208,918 |
| | Oregon | 2,632,663 | 991,393 | 385 | 30,222 | 158,590 |
| | California | 23,668,562 | 8,630,198 | 2,449 | 273,396 | 1,122,513 |
| | Hawaii | 965,000 | 294,051 | 55 | 7,841 | 19,869 |
| | Alaska | 400,481 | 131,068 | 65 | 2,651 | 25,971 |
| | **Total** | **226,504,825** | **80,376,609** | **35,800** | **$6,500,000** | **$12,400,000** |

Source: C-STORE BUSINESS Magazine, 1981

# U.S. Market Shares by Brand Category and Average Prices

| | Percent of Total Gallonage Sales | | | | | Cents per Gal. Including Taxes (b) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Refiner-Marketers | | Independent Marketers | | | Refiner-Marketers | | Independent Marketers | | | |
| Year | Majors (a) | Other Refiner Brands | Majors (a) | Other Refiner Brands | Non-Branded | Majors (a) | Other Refiner Brands | Majors (a) | Other Refiner Brands | Non-Branded | U.S. Average |
| **1981 Average (c)** | **7.7%** | **11.3%** | **57.4%** | **12.1%** | **11.5%** | **131.0¢** | **127.9¢** | **134.7¢** | **131.0¢** | **130.4¢** | **132.7¢** |
| **1980 Average** | **7.7** | **11.6** | **57.8** | **11.9** | **11.2** | **118.9** | **116.3** | **121.0** | **118.3** | **117.5** | **124.5** |
| **1979 Average** | **7.9** | **10.9** | **58.4** | **11.3** | **11.5** | **84.3** | **84.6** | **86.0** | **84.6** | **85.1** | **85.4** |
| **1978 Average** | **7.6** | **10.5** | **58.5** | **11.7** | **11.8** | **61.7** | **60.8** | **64.5** | **62.6** | **60.7** | **63.2** |
| **1977 Average** | **7.1** | **10.1** | **59.6** | **11.4** | **11.8** | **59.4** | **58.6** | **62.2** | **59.8** | **58.4** | **60.9** |
| **1981** | | | | | | | | | | | |
| January | 7.5 | 11.5 | 57.5 | 12.3 | 11.2 | 124.4 | 121.1 | 126.8 | 123.6 | 123.2 | 125.2 |
| February | 7.7 | 11.5 | 57.1 | 12.2 | 11.5 | 131.8 | 126.8 | 132.8 | 129.4 | 129.9 | 131.3 |
| March | 7.8 | 11.7 | 57.1 | 11.8 | 11.5 | 135.2 | 131.7 | 135.0 | 132.1 | 132.7 | 133.9 |
| April | 7.7 | 11.4 | 56.9 | 12.1 | 11.9 | 133.6 | 130.7 | 137.7 | 133.1 | 131.6 | 135.3 |
| May | 7.6 | 11.8 | 56.6 | 12.2 | 11.9 | 132.3 | 130.0 | 136.5 | 132.1 | 131.2 | 134.4 |
| June | 7.6 | 11.3 | 57.7 | 12.1 | 11.4 | 131.6 | 128.7 | 136.6 | 132.2 | 131.7 | 134.1 |
| July | 7.6 | 11.0 | 57.6 | 12.2 | 11.6 | 130.6 | 127.7 | 136.1 | 132.1 | 131.4 | 133.7 |
| August | 7.8 | 10.2 | 58.4 | 12.3 | 11.3 | 130.1 | 127.3 | 135.5 | 132.0 | 130.7 | 132.2 |
| September | 7.9 | 11.2 | 57.7 | 11.9 | 11.3 | 129.6 | 126.7 | 135.6 | 132.5 | 131.5 | 133.3 |
| **(This series was discontinued by DOE in late 1981 because of budget cuts)** | | | | | | | | | | | |
| **1980** | | | | | | | | | | | |
| January | 7.8 | 10.8 | 57.7 | 12.0 | 11.7 | 107.8 | 108.7 | 109.3 | 107.5 | 108.5 | 108.8 |
| February | 7.7 | 11.1 | 57.2 | 11.6 | 12.4 | 114.6 | 113.0 | 115.2 | 112.1 | 113.8 | 114.4 |
| March | 7.7 | 11.8 | 56.9 | 12.3 | 11.3 | 119.4 | 116.2 | 119.3 | 116.4 | 117.5 | 118.3 |
| April | 7.7 | 11.6 | 57.0 | 11.9 | 11.9 | 120.4 | 116.9 | 121.5 | 118.7 | 119.0 | 120.4 |
| May | 7.6 | 11.5 | 56.9 | 11.2 | 12.9 | 121.7 | 118.4 | 123.2 | 120.5 | 119.2 | 121.8 |
| June | 7.5 | 11.1 | 57.5 | 11.1 | 12.7 | 122.1 | 119.1 | 124.6 | 122.1 | 120.8 | 122.9 |
| July | 7.6 | 11.1 | 57.1 | 11.7 | 12.5 | 121.6 | 118.9 | 124.3 | 122.0 | 119.6 | 122.6 |
| August | 7.8 | 11.6 | 56.9 | 11.3 | 12.4 | 120.9 | 118.3 | 123.7 | 121.3 | 118.8 | 122.0 |
| September | 7.6 | 12.1 | 57.2 | 11.3 | 11.8 | 119.6 | 116.8 | 122.6 | 120.0 | 118.6 | 120.9 |
| October | 7.6 | 11.9 | 56.4 | 12.1 | 12.0 | 119.1 | 116.0 | 122.1 | 119.7 | 117.9 | 120.4 |
| November | 7.6 | 11.6 | 56.2 | 12.2 | 12.4 | 119.1 | 115.9 | 122.5 | 119.4 | 117.1 | 120.4 |
| December | 7.8 | 11.7 | 57.9 | 11.8 | 10.7 | 120.7 | 117.9 | 123.2 | 120.0 | 119.1 | 121.4 |
| **1979** | | | | | | | | | | | |
| January | 8.2 | 10.8 | 59.0 | 10.7 | 11.3 | 65.9 | 65.8 | 68.3 | 66.8 | 65.7 | 67.4 |
| February | 7.9 | 10.5 | 59.0 | 10.7 | 11.9 | 67.3 | 66.9 | 69.3 | 68.0 | 66.7 | 68.4 |
| March | 8.0 | 11.1 | 59.1 | 11.0 | 10.8 | 70.4 | 70.5 | 71.6 | 71.0 | 68.9 | 71.0 |
| April | 7.6 | 11.2 | 58.2 | 11.6 | 11.4 | 71.7 | 71.9 | 75.5 | 74.1 | 74.2 | 74.5 |
| May | 7.8 | 10.9 | 58.8 | 11.4 | 11.2 | 79.2 | 80.0 | 79.7 | 78.4 | 79.5 | 79.6 |
| June | 7.3 | 11.0 | 59.7 | 10.7 | 11.3 | 83.7 | 84.0 | 84.5 | 82.5 | 84.3 | 84.1 |
| July | 7.8 | 11.0 | 58.1 | 11.3 | 11.8 | 88.3 | 89.6 | 89.2 | 87.9 | 90.3 | 89.1 |
| August | 8.3 | 10.7 | 58.3 | 11.7 | 11.0 | 92.5 | 93.3 | 93.3 | 92.1 | 93.2 | 93.0 |
| September | 8.0 | 10.8 | 57.8 | 11.8 | 11.6 | 94.5 | 94.5 | 96.6 | 95.1 | 97.4 | 96.1 |
| October | 8.0 | 11.3 | 57.5 | 11.7 | 11.5 | 97.1 | 97.4 | 98.7 | 97.1 | 98.8 | 98.2 |
| November | 7.9 | 10.5 | 57.4 | 12.0 | 12.2 | 98.6 | 98.8 | 100.9 | 99.1 | 99.1 | 100.1 |
| December | 7.8 | 11.2 | 58.2 | 11.3 | 11.5 | 101.7 | 102.1 | 103.8 | 102.5 | 103.1 | 103.2 |

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(a) Primary and secondary brand names belonging to the following 15 major refiners: Amoco, Atlantic Richfield, Chevron, Cities Service, Conoco, Exxon, Getty, Gulf, Marathon, Mobil, Phillips, Shell, Sun, Texaco, and Union of California; (b) Weighted average price includes all grades of gasoline and types of service (full & self). Refiner-marketers' prices include an estimated weighted average tax and independent marketers include reported taxes; (c) This is an average for the first 9 months of 1981 when DOE discontinued the series.
Source: Energy Information Administration, Retail Sales of Gasoline.

# U.S. Market Shares of Gasoline at Service Stations (a)

| | % of Total Gallonage Sales | | | Millions of Gal. per Day | | | |
|---|---|---|---|---|---|---|---|
| Year | Refiner-Marketers | Nonbranded Independents | Branded Independents | U.S. Average | Refiner-Marketers | Nonbranded Independents | Branded Independents |
| 1981 (b) | 18.9% | 11.5% | 69.5% | 191 | 36 | 22 | 133 |
| 1980 | 19.2 | 11.2 | 68.8 | 190 | 37 | 23 | 131 |
| 1979 | 18.8 | 11.5 | 89.7 | 201 | 38 | 23 | 140 |
| 1978 | 18.0 | 11.8 | 70.2 | 225 | 41 | 26 | 158 |
| 1977 | 17.2 | 11.8 | 71.0 | 227 | 39 | 27 | 161 |
| 1976 | 16.9 | 10.9 | 72.1 | 213 | 36 | 23 | 154 |
| 1975 | 14.8 | 10.2 | 75.0 | 209 | 31 | 21 | 157 |
| **1981** | | | | | | | |
| January | 19.0 | 11.2 | 69.8 | 185 | 35 | 21 | 129 |
| February | 19.2 | 11.5 | 69.3 | 188 | 36 | 22 | 131 |
| March | 19.5 | 11.6 | 68.9 | 186 | 36 | 21 | 128 |
| April | 19.1 | 11.9 | 69.0 | 191 | 36 | 23 | 132 |
| May | 19.4 | 11.9 | 68.7 | 189 | 37 | 22 | 130 |
| June | 18.8 | 11.4 | 69.8 | 199 | 38 | 23 | 139 |
| July | 18.7 | 11.6 | 69.8 | 200 | 37 | 23 | 139 |
| August | 18.0 | 11.3 | 70.7 | 191 | 34 | 22 | 135 |
| September | 19.0 | 11.3 | 69.7 | 191 | 36 | 22 | 133 |
| | **(This report was discontinued by DOE due to budget reductions)** | | | | | | |
| **1980** | | | | | | | |
| January | 18.6 | 11.7 | 69.7 | 178 | 33 | 21 | 124 |
| February | 18.8 | 12.4 | 68.8 | 186 | 35 | 23 | 128 |
| March | 19.5 | 11.3 | 69.2 | 182 | 36 | 20 | 126 |
| April | 19.2 | 11.9 | 68.9 | 190 | 37 | 23 | 131 |
| May | 19.0 | 12.9 | 68.1 | 190 | 36 | 24 | 129 |
| June | 18.7 | 12.7 | 68.6 | 193 | 36 | 25 | 133 |
| July | 18.7 | 12.5 | 68.8 | 197 | 37 | 25 | 136 |
| August | 19.4 | 12.4 | 68.2 | 197 | 38 | 24 | 134 |
| September | 19.7 | 11.8 | 68.5 | 191 | 38 | 23 | 131 |
| October | 19.5 | 12.0 | 68.5 | 190 | 37 | 23 | 130 |
| November | 19.3 | 12.4 | 68.3 | 190 | 37 | 24 | 130 |
| December | 19.6 | 10.7 | 69.7 | 194 | 38 | 21 | 135 |
| **1979** | | | | | | | |
| January | 19.0 | 11.3 | 69.7 | 201 | 38 | 23 | 140 |
| February | 18.4 | 11.9 | 69.7 | 211 | 39 | 25 | 147 |
| March | 19.1 | 10.8 | 70.1 | 204 | 39 | 22 | 143 |
| April | 18.8 | 11.4 | 69.8 | 207 | 39 | 24 | 144 |
| May | 18.7 | 11.2 | 70.1 | 205 | 38 | 23 | 144 |
| June | 18.3 | 11.3 | 70.4 | 211 | 39 | 24 | 148 |
| July | 18.8 | 11.8 | 69.4 | 198 | 37 | 23 | 137 |
| August | 19.0 | 11.0 | 70.0 | 207 | 39 | 23 | 145 |
| September | 18.8 | 11.6 | 69.6 | 188 | 35 | 22 | 131 |
| October | 19.3 | 11.5 | 69.2 | 200 | 39 | 23 | 138 |
| November | 18.4 | 12.2 | 69.4 | 195 | 36 | 24 | 136 |
| December | 19.0 | 11.5 | 69.5 | 188 | 36 | 22 | 131 |

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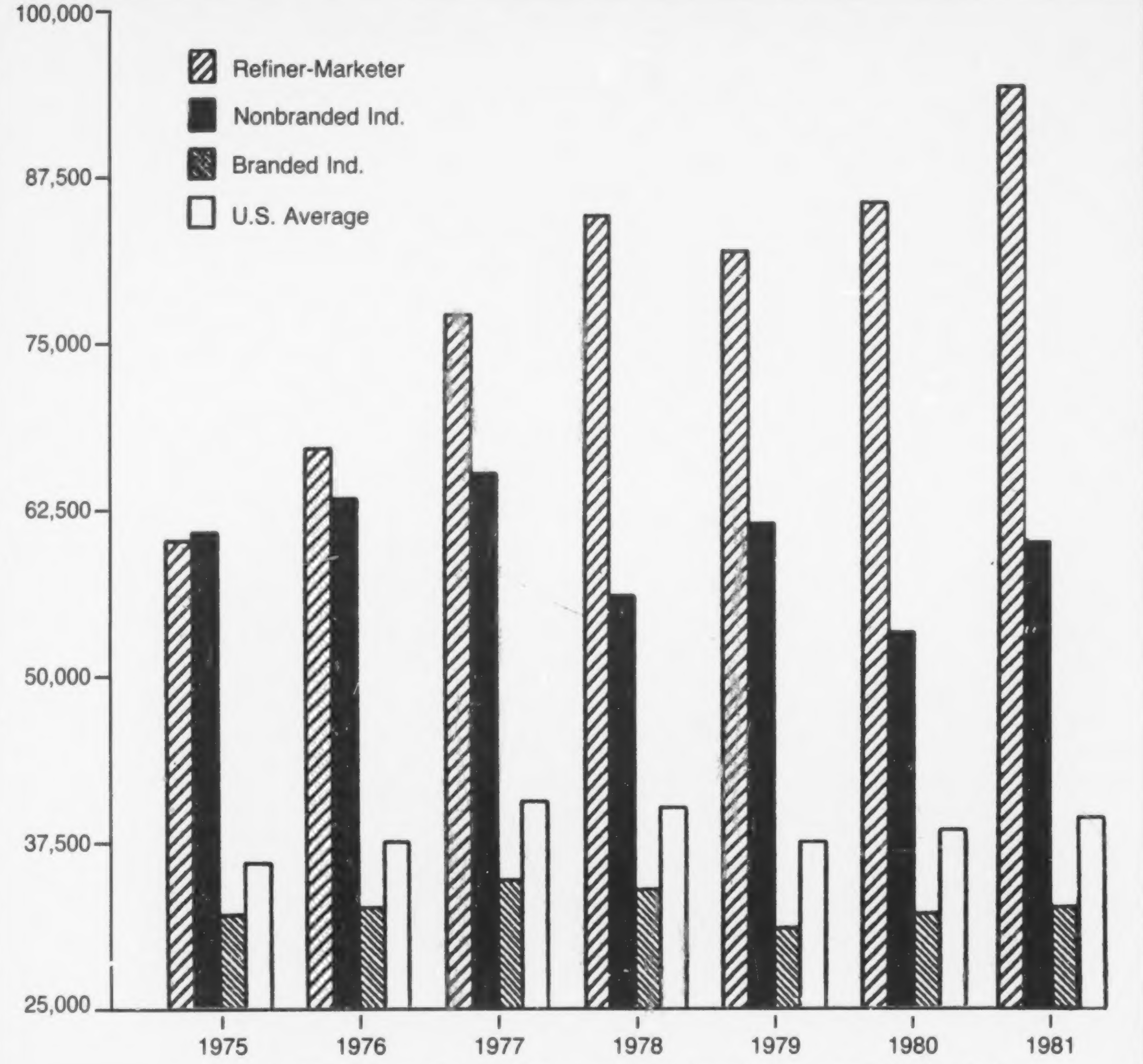
(a) As defined by Census Bureau, 50% or more of sales revenues from sale of gasoline and oil products; (b) Nine-month totals because DOE discontinued these reports at that time.
Source: Energy Information Administration, Retail Sales of Gasoline.

# Average Sales by Retail Outlet by Marketer Type



*Data shown are for the month of July in the years indicated.*

## Average Monthly Sales of Retail Outlets, Gal. per Station (a)

| | U.S. Average | Refiner-Marketers | Nonbranded Independent | Branded Independent |
|---|---|---|---|---|
| Jan. 1975 | 31,751 | 54,731 | 65,744 | 27,803 |
| Jan. 1976 | 32,907 | 63,898 | 67,692 | 27,535 |
| Jan. 1977 | 35,439 | 64,713 | 56,744 | 30,164 |
| Jan. 1978 | 37,081 | 69,165 | 56,000 | 31,672 |
| Jan. 1979 | 37,200 | 79,250 | 48,951 | 31,427 |
| Jan. 1980 | 36,085 | 77,308 | 53,750 | 30,125 |
| Jan. 1981 (b) | 36,734 | 80,231 | 56,612 | 30,365 |
| July 1975 | 35,943 | 59,606 | 60,186 | 32,030 |
| July 1976 | 37,614 | 66,392 | 62,660 | 32,610 |
| July 1977 | 40,653 | 76,048 | 64,496 | 34,715 |
| July 1978 | 40,246 | 83,227 | 55,624 | 34,033 |
| July 1979 | 37,596 | 80,595 | 60,756 | 31,087 |
| July 1980 | 38,433 | 84,173 | 52,827 | 32,093 |
| July 1981 (b) | 40,309 | 91,628 | 57,200 | 33,621 |

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(a) January data are not comparable to July data because of seasonal variations; (b) DOE discontinued this series in late 1981.
Source: Energy Information Administration, Retail Sales of Gasoline.

# Share of Markets

**Subtle but significant shifts in market shares over the past decade are apparent in an American Petroleum Institute (API) "discussion paper" spanning 30 years of oil history.**

Released just before the new year, the study shows that the major and semi-major oil companies have lost ground to the independents in distribution of gasoline and other products.

There's no need to be concerned about the big companies, however. Even though their hold has eroded somewhat, the top 20 still distribute seven out of every 10 gallons of refined products.

The marketing data are only one segment of a study that was intended to demonstrate statistically the decline in energy industry concentration ratios, especially over the past decade.

The study, entitled "Market Shares and Individual Company Data for U.S. Energy Markets: 1950-1980," was prepared by API's policy analysis department.

A caveat specifies that "the contents of this paper are for the purposes of study and discussion and do not necessarily represent the view of the American Petroleum Institute or any of its members."

## The Erosion of Power in Oil Marketing

**(Highlights of an American Petroleum Institute study on the decline of oil industry concentration ratios, 1970-1980).**

| | 1980 | | 1975 | | 1970 | | |
|---|---|---|---|---|---|---|---|
| | **Sales** | **% of National Market** | **Sales** | **% of National Market** | **Sales** | **% of National Market** | **% Decline 1970-1980** |
| **Motor Gasoline (Add 000,000 gal.)** | | | | | | | |
| Top 4 Cos. | 29,772 | 28.5% | 30,497 | 29.5% | 27,563 | 30.7% | -2.2% |
| Top 8 | 51,564 | 49.3 | 52,129 | 50.3 | 49,022 | 54.6 | -5.3 |
| Top 15 | 68,303 | 65.4 | 71,032 | 68.6 | 67,319 | 74.9 | -9.5 |
| Top 20 | 74,187 | 71.0 | 77,367 | 74.7 | 71,915 | 80.0 | -9.0 |
| **U.S. Total** | **104,491** | — | **103,547** | — | **89,862** | — | — |
| **Refined Products (Add 000,000 gal.)** | | | | | | | |
| Top 4 Cos. | 71,852 | 27.6 | 77,677 | 31.0 | 76,573 | 34.0 | -6.4 |
| Top 8 | 114,761 | 46.1 | 128,343 | 51.3 | 139,094 | 57.3 | -11.2 |
| Top 15 | 169,734 | 65.1 | 174,655 | 69.8 | 173,950 | 77.2 | -12.1 |
| Top 20 | 187,670 | 72.0 | 191,702 | 70.6 | 185,892 | 82.5 | -10.5 |
| **U.S. Total** | **260,702** | — | **250,216** | — | **225,305** | — | — |
| **Refining Capacity (Add 000 b/d)** | | | | | | | |
| Top 4 Cos. | 5,302 | 29.0 | 4,519 | 29.9 | 4,168 | 32.5 | -3.5 |
| Top 8 | 8,957 | 49.0 | 8,081 | 53.5 | 7,365 | 57.5 | -8.5 |
| Top 15 | 12,242 | 67.0 | 11,024 | 72.9 | 9,999 | 78.1 | -11.1 |
| Top 20 | 13,617 | 74.5 | 12,116 | 80.2 | 10,794 | 84.3 | -9.8 |
| **U.S. Total** | **18,269** | — | **55,115** | — | **12,811** | — | — |
| **Refinery Crude Runs (Add 000 b/d)** | | | | | | | |
| Top 4 Cos. | 4,231 | 31.4 | 4,091 | 32.9 | 3,719 | 34.2 | -2.8 |
| Top 8 | 7,323 | 54.3 | 7,174 | 57.7 | 6,627 | 61.0 | -6.7 |
| Top 15 | 9,879 | 75.3 | 9,878 | 79.4 | 9,194 | 84.6 | -9.3 |
| Top 20 | 10,915 | 81.0 | 10,804 | 86.8 | 9,901 | 91.1 | -10.1 |
| **U.S. Total** | **13,483** | — | **12,442** | — | **10,870** | — | — |

*Includes Puerto Rico

Special note: Because of the shifts in market shares, the companies in the various categories are not automatically the same year after year.

Source: "Market Shares and Individual Company Data for U.S. Energy Markets: 1950-1980," Discussion Paper #014R, American Petroleum Institute, January, 1982.

# Top 11 Marketers: A Seven Year Overview

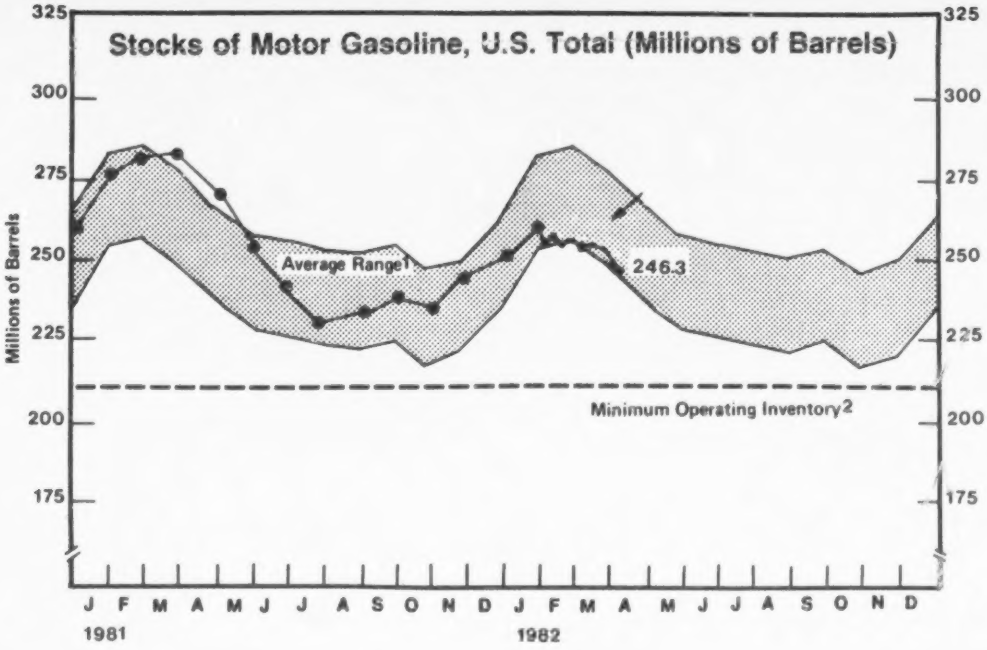
| | 1981 | | 1980 | | 1979 | | 1978 | | 1977 | | 1976 | | 1975 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Rank** | **Share** | **Rank** | **Share** | **Rank** | **Share** | **Rank** | **Share** | **Rank** | **Share** | **Rank** | **Share** | **Rank** | **Share** |
| Amoco | 1 | 7.31 | 3 | 7.40 | 2 | 7.48 | 2 | 7.71 | 2 | 7.30 | 4 | 7.20 | 2 | 7.17 |
| Shell | 2 | 6.92 | 2 | 7.44 | 3 | 7.30 | 1 | 7.70 | 1 | 7.53 | 3 | 7.36 | 4 | 7.00 |
| Exxon | 3 | 6.80 | 1 | 7.54 | 1 | 7.65 | 3 | 7.28 | 3 | 7.14 | 2 | 7.40 | 3 | 7.10 |
| Texaco | 4 | 5.70 | 5 | 5.95 | 5 | 6.01 | 4 | 6.75 | 4 | 7.11 | 1 | 7.50 | 1 | 7.94 |
| Gulf | 4 | 5.70 | 7 | 5.39 | 4 | 6.36 | 5 | 5.83 | 5 | 5.91 | 5 | 6.11 | 5 | 6.27 |
| Mobil | 6 | 5.33 | 4 | 6.01 | 6 | 5.78 | 6 | 5.55 | 6 | 5.59 | 6 | 5.78 | 6 | 6.02 |
| Chevron | 7 | 5.19 | 6 | 5.77 | 7 | 5.30 | 7 | 4.76 | 7 | 4.75 | 7 | 4.70 | 7 | 4.58 |
| Atlantic Richfield | 8 | 3.84 | 8 | 3.87 | 8 | 3.89 | 8 | 3.79 | 8 | 3.85 | 8 | 4.00 | 8 | 3.96 |
| Union | 9 | 3.33 | 9 | 3.50 | 9 | 3.49 | 9 | 3.28 | 11 | 3.08 | 11 | 3.24 | 11 | 3.18 |
| Phillips | 10 | 2.90 | 10 | 2.83 | 11 | 2.85 | 11 | 3.02 | 10 | 3.15 | 10 | 3.43 | 9 | 3.93 |
| Sun | 11 | 2.53 | 11 | 2.74 | 10 | 3.01 | 10 | 3.20 | 9 | 3.39 | 9 | 3.49 | 10 | 3.49 |

Source: Lundberg Letters and NPN Factbooks.

**Amoco became the No. 1** gasoline marketer in 1981, jumping from third to first place and displacing Exxon, which had been ruler of the roost for two successive years, according to Lundberg Letter, which keeps a running tab on marketplace developments.

Shell, which has been the leader in 1978 and 1977, remained in second place in 1981. Exxon dropped to third. Gulf, which had been coming on strong but slipped badly in 1980, resumed its upward surge in 1981 and wound up in a virtual tie with Texaco, whose base position has been eroding for years.

An interesting sidelight of the marketing data compiled by Lundberg emphasizes how the majors' hold on market shares continues to deteriorate. As recently as 1977, at least four majors held shares over the 7% mark. This dropped to three majors in 1978 through 1980, and to one in 1971—Amoco. *(See table above).*

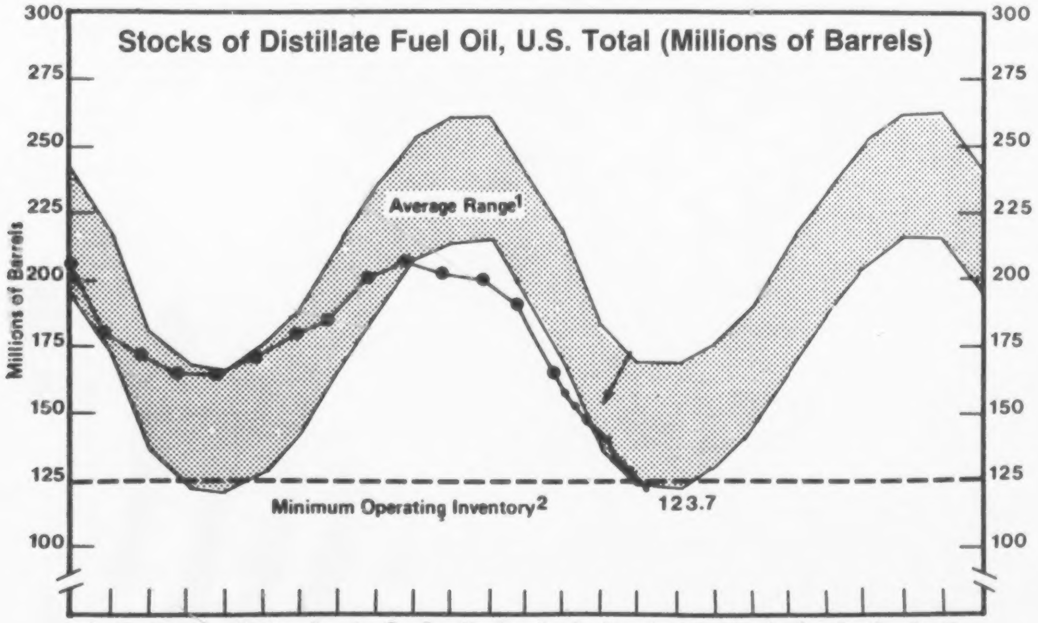


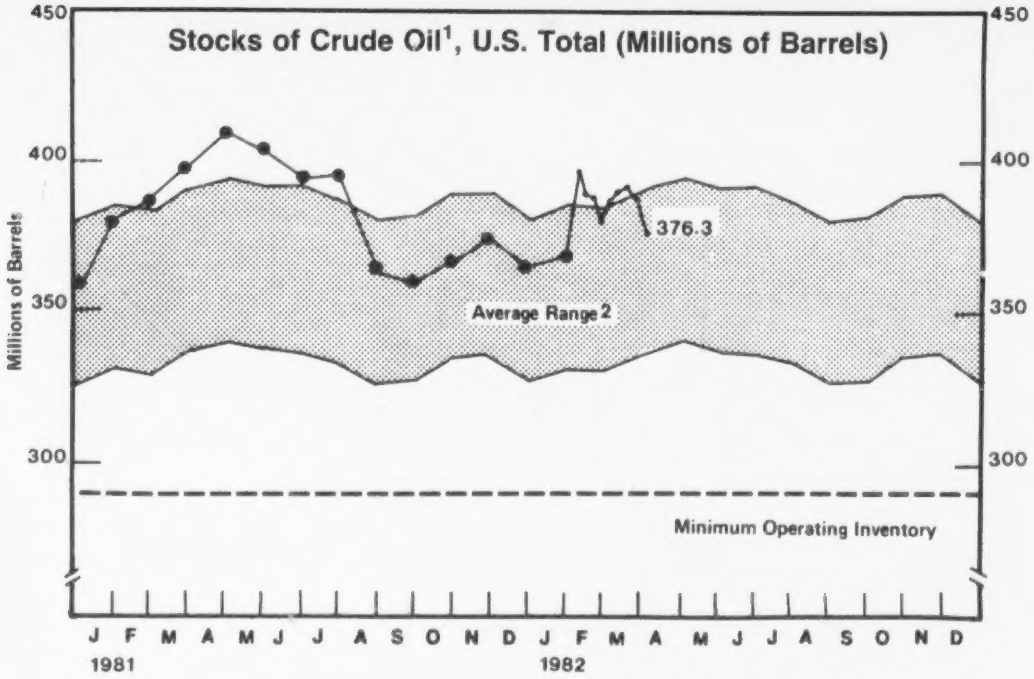
Product stocks at the Primary Level include those held at refineries, in pipelines, and at major bulk terminals. They do no include stocks held in secondary distribution facilities such as jobber tanks, consumer tanks, and/or barges designed for consumer markets.

(1) The average level and width of average range are based on three years of monthly data for the period of January 1977, through December 1979. The seasonal pattern is based on seven years of monthly data for the period of January 1973 through December 1979.

(2) National Petroleum Council defines the Minimum Operating Inventory as the minimum level required for routine operation. By its definition, runouts and shortages could occur if inventory levels fall below that level for any extended period of time. See NPC's full report, issued in December 1979 for complete details on primary and secondary storage.

Source: Department of Energy, Weekly Statistical Reports, April, 1982.





Crude Stocks at Primary Levels include those held at refineries, in pipelines, and in lease tanks, but do not include those held in the Strategic Petroleum Reserve operated by the U.S. Government.

(1) The average level and width of average range are based on three years of monthly data for the period of January 1977, through December 1979. The seasonal pattern is based on seven years of monthly data for the period of January 1973 through December 1979.

(2) National Petroleum Council defines the Minimum Operating Inventory as the minimum level required for routine operation. By its definition, runouts and shortages could occur if inventory levels fall below that level for any extended period of time. See NPN's full report, issued in December 1979 for complete details on primary and secondary storage.

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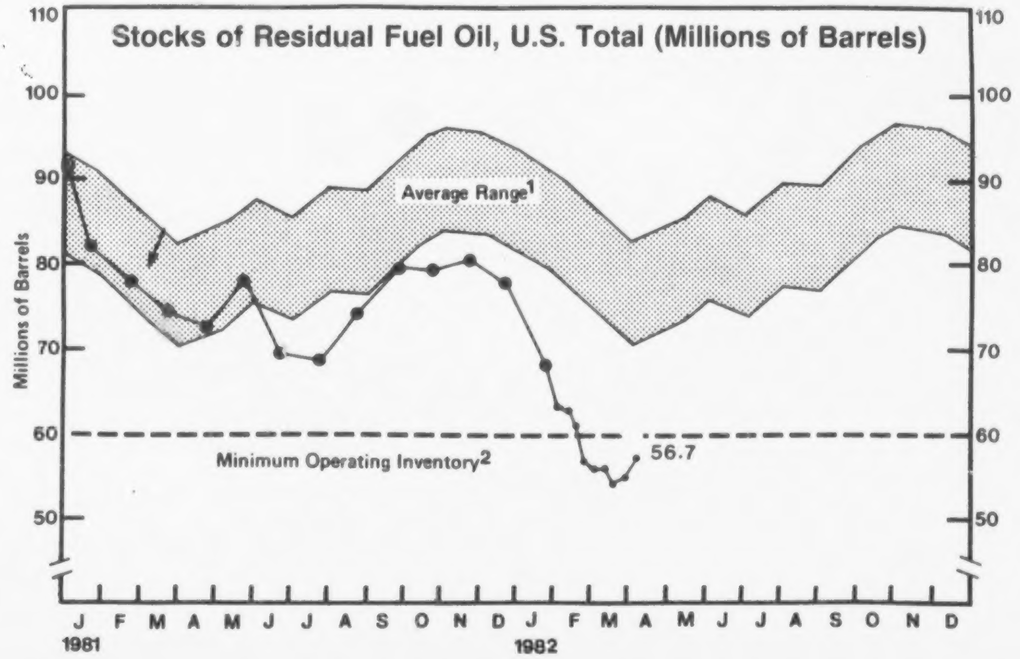
Source: Department of Energy, Weekly Statistical Report, April, 1982.



# Crude and Product Stocks at Primary Levels (a)

(Add 000,000 bbl.)

| 1981 | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crude Oil | 381.5 | 386.8 | 397.2 | 407.2 | 402.3 | 392.2 | 392.5 | 365.2 | 361.4 | 369.5 | 372.3 | 368.5 |
| Gasoline | 276.5 | 284.1 | 284.9 | 271.8 | 258.2 | 241.7 | 227.1 | 232.5 | 237.0 | 235.0 | 247.4 | 251.4 |
| Jet Fuel | 39.5 | 38.7 | 39.2 | 40.7 | 44.7 | 45.4 | 44.9 | 44.9 | 43.3 | 42.8 | 41.9 | 40.5 |
| Kerosine | 10.5 | 10.4 | 11.0 | 11.9 | 12.6 | 13.2 | 13.2 | 13.6 | 13.8 | 12.5 | 12.4 | 11.1 |
| Distillate | 180.0 | 172.5 | 164.6 | 164.6 | 171.9 | 180.2 | 186.7 | 200.3 | 206.8 | 201.1 | 200.0 | 190.2 |
| Residual | 82.3 | 78.2 | 74.9 | 73.0 | 78.5 | 70.1 | 69.3 | 74.8 | 80.0 | 79.8 | 80.8 | 78.3 |
| Unfin. Oil | 121.4 | 122.2 | 126.0 | 126.4 | 126.2 | 126.1 | 126.1 | 124.5 | 118.5 | 119.2 | 116.4 | 112.0 |
| Other Oils | 191.7 | 188.7 | 186.8 | 193.6 | 202.5 | 206.0 | 210.8 | 217.8 | 220.6 | 213.5 | 212.3 | 206.2 |
| **Total** | **1,283.4** | **1,281.5** | **1,284.7** | **1,289.2** | **1,296.9** | **1,274.9** | **1,270.7** | **1,273.6** | **1,281.4** | **1,273.5** | **1,283.6** | **1,258.2** |

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(a) Crude stocks include oil in transit to refiners but not Strategic Petroleum Reserve. Product stocks include those held in pipelines, at refineries, and at major bulk plants.

# Motor Gasoline Stocks by PAD Regions

(Add 000,000 bbl.)

| 1981 | East Coast | Midwest | Gulf Coast | Rocky Mtn. | West Coast |
|---|---|---|---|---|---|
| Jan. | 71.7 | 86.4 | 77.6 | 9.7 | 31.5 |
| Feb. | 74.2 | 90.5 | 79.6 | 10.3 | 29.5 |
| Mar. | 79.4 | 89.7 | 78.6 | 10.2 | 26.9 |
| Apr. | 77.6 | 84.2 | 76.3 | 9.4 | 24.4 |
| May | 72.9 | 80.1 | 72.3 | 8.6 | 24.3 |
| June | 69.4 | 72.4 | 66.1 | 7.4 | 26.4 |
| July | 62.3 | 65.8 | 63.9 | 6.5 | 28.6 |
| Aug. | 63.8 | 66.5 | 68.6 | 6.0 | 27.7 |
| Sept. | 69.5 | 65.3 | 68.4 | 5.9 | 28.0 |
| Oct. | 69.3 | 65.8 | 64.7 | 6.3 | 28.8 |
| Nov. | 69.7 | 69.1 | 70.0 | 7.7 | 30.9 |
| Dec. | 69.3 | 72.6 | 69.6 | 8.5 | 31.4 |

(Add 000,000 bbl.)

| 1980 | East Coast | Midwest | Gulf Coast | Rocky Mtn. | West Coast |
|---|---|---|---|---|---|
| Jan. | 70.2 | 83.1 | 69.8 | 8.8 | 30.3 |
| Feb. | 75.0 | 85.0 | 73.7 | 9.3 | 31.4 |
| Mar. | 73.3 | 89.0 | 80.9 | 9.7 | 29.4 |
| Apr. | 74.8 | 83.3 | 75.7 | 9.4 | 28.6 |
| May | 75.2 | 76.9 | 74.3 | 8.9 | 27.8 |
| June | 76.4 | 79.1 | 73.2 | 8.4 | 27.9 |
| July | 72.9 | 78.9 | 73.2 | 6.6 | 29.1 |
| Aug. | 72.8 | 76.8 | 71.4 | 6.5 | 30.2 |
| Sept. | 75.7 | 77.5 | 68.3 | 6.2 | 30.5 |
| Oct. | 69.9 | 70.9 | 69.8 | 6.6 | 29.2 |
| Nov. | 69.2 | 72.8 | 75.8 | 7.8 | 31.6 |
| Dec. | 71.1 | 76.9 | 73.8 | 8.6 | 31.0 |

# Distillate Stocks by PAD Regions

(Add 000,000 bbl.)

| 1981 | East Coast | Midwest | Gulf Coast | Rocky Mtn. | West Coast |
|---|---|---|---|---|---|
| Jan. | 72.2 | 57.9 | 34.1 | 3.4 | 12.4 |
| Feb. | 69.7 | 56.1 | 32.4 | 3.3 | 11.1 |
| Mar. | 64.9 | 52.5 | 32.5 | 3.3 | 11.4 |
| Apr. | 64.4 | 52.4 | 34.7 | 2.9 | 10.3 |
| May | 68.2 | 50.6 | 39.2 | 3.2 | 10.6 |
| June | 73.6 | 48.8 | 43.2 | 3.4 | 11.1 |
| July | 81.7 | 49.8 | 40.8 | 3.7 | 10.8 |
| Aug. | 86.3 | 54.3 | 44.6 | 3.8 | 11.3 |
| Sept. | 92.0 | 54.3 | 44.8 | 3.6 | 12.0 |
| Oct. | 94.9 | 50.9 | 40.0 | 3.3 | 12.0 |
| Nov. | 95.8 | 51.8 | 36.8 | 3.6 | 12.0 |
| Dec. | 87.7 | 49.6 | 35.4 | 3.9 | 13.5 |

(Add 000,000 bbl.)

| 1980 | East Coast | Midwest | Gulf Coast | Rocky Mtn. | West Coast |
|---|---|---|---|---|---|
| Jan. | 92.1 | 65.5 | 38.7 | 3.5 | 12.6 |
| Feb. | 77.9 | 61.1 | 36.1 | 3.7 | 12.8 |
| Mar. | 67.1 | 57.3 | 36.8 | 3.9 | 12.8 |
| Apr. | 71.4 | 55.7 | 33.5 | 3.9 | 12.8 |
| May | 78.0 | 54.3 | 34.7 | 3.8 | 12.6 |
| June | 85.8 | 56.8 | 38.4 | 3.5 | 12.1 |
| July | 96.0 | 60.2 | 41.2 | 3.9 | 12.6 |
| Aug. | 104.1 | 62.4 | 42.9 | 3.9 | 13.0 |
| Sept. | 108.2 | 62.6 | 45.5 | 3.6 | 12.4 |
| Oct. | 106.5 | 57.4 | 46.1 | 3.3 | 12.3 |
| Nov. | 103.3 | 58.2 | 44.2 | 3.3 | 13.4 |
| Dec. | 90.3 | 58.5 | 39.8 | 3.4 | 13.1 |

# Residual Stocks by PAD Regions

(Add 000,000 bbl.)

| 1981 | East Coast | Midwest | Gulf Coast | Rocky Mtn. | West Coast |
|---|---|---|---|---|---|
| Jan. | 38.7 | 9.2 | 22.2 | 0.8 | 11.4 |
| Feb. | 38.5 | 9.2 | 19.7 | 0.7 | 10.1 |
| Mar. | 37.4 | 7.9 | 19.4 | 0.6 | 9.7 |
| Apr. | 36.5 | 7.2 | 19.1 | 0.5 | 9.7 |
| May | 38.5 | 7.5 | 21.5 | 0.6 | 10.5 |
| June | 33.7 | 7.0 | 17.4 | 0.6 | 11.3 |
| July | 32.9 | 7.7 | 17.7 | 0.5 | 10.4 |
| Aug. | 34.3 | 8.2 | 21.0 | 0.6 | 10.7 |
| Sept. | 40.0 | 8.5 | 20.4 | 0.7 | 10.5 |
| Oct. | 40.4 | 7.8 | 20.4 | 0.7 | 10.4 |
| Nov. | 43.0 | 8.1 | 19.4 | 0.7 | 9.6 |
| Dec. | 40.6 | 8.3 | 18.9 | 0.7 | 9.9 |

(Add 000,000 bbl.)

| 1980 | East Coast | Midwest | Gulf Coast | Rocky Mtn. | West Coast |
|---|---|---|---|---|---|
| Jan. | 49.0 | 12.7 | 22.1 | 1.0 | 12.4 |
| Feb. | 42.6 | 12.5 | 22.7 | 1.0 | 12.1 |
| Mar. | 43.0 | 12.0 | 19.5 | 0.9 | 12.8 |
| Apr. | 43.8 | 10.7 | 17.3 | 0.9 | 12.5 |
| May | 43.4 | 10.8 | 20.1 | 0.8 | 12.6 |
| June | 45.1 | 10.9 | 18.9 | 0.8 | 12.0 |
| July | 44.0 | 9.8 | 19.4 | 0.9 | 11.6 |
| Aug. | 43.6 | 9.3 | 21.0 | 0.9 | 12.0 |
| Sept. | 43.8 | 8.9 | 22.3 | 0.9 | 12.0 |
| Oct. | 45.9 | 9.0 | 23.0 | 0.8 | 12.3 |
| Nov. | 46.5 | 8.6 | 25.2 | 0.9 | 12.1 |
| Dec. | 45.4 | 9.1 | 23.8 | 0.8 | 12.6 |

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Source: For all tables on this page—Department of Energy, Weekly Petroleum Status Report.

## U.S. Estimated Petroleum Balance (Add 000 b/d)

| | Full year | | | 4th Quarter | | 3rd Quarter | | 2nd Quarter | |
|---|---|---|---|---|---|---|---|---|---|
| **Supply Deliveries From Primary Storage** | 1981 | 1980 | %Chng. | 1981 | %Chng. 1980 | 1981 | %Chng. vs. 1980 | 1981 | %Chng. vs. 1980 |
| **Products Supplied:** | | | | | | | | | |
| Motor Gasoline | 6,594 | 6,882 | (4.2) | 6,597 | (3.2) | 6,801 | (1.4) | 6,619 | (5.1) |
| Unleaded Motor Gasoline (a) | 3,453 | 3,111 | 11.0 | 3,474 | 5.2 | 3,581 | 13.1 | 3,490 | 14.9 |
| Naptha-jet | 199 | 217 | (8.3) | 182 | (16.5) | 232 | 6.9 | 221 | 2.3 |
| Kerosine-jet | 814 | 852 | (4.5) | 804 | (3.4) | 806 | (5.4) | 778 | (7.6) |
| Kerosine | 126 | 159 | (20.8) | 154 | (8.3) | 90 | (29.7) | 107 | (13.7) |
| Distillate Fuel Oil | 2,830 | 2,968 | (4.6) | 2,983 | (9.0) | 2,494 | 4.0 | 2,485 | (2.9) |
| Residual Fuel Oil | 2,040 | 2,547 | (19.9) | 1,910 | (24.4) | 2,036 | 13.5 | 1,894 | (20.6) |
| All Other Oils | 3,671 | 3,856 | (4.8) | 3,565 | (10.4) | 3,730 | 2.6 | 3,614 | (1.7) |
| Reclassified | -312 | -460 | (32.2) | -305 | (35.7) | -275 | (30.4) | -276 | (32.4) |
| Total Domestic Deliveries | 15,962 | 17,021 | (6.2) | 15,890 | (8.4) | 15,914 | (1.1) | 15,442 | (5.7) |
| Exports | 576 | 542 | 6.3 | 626 | 6.1 | 551 | 17.7 | 519 | (7.7) |
| **Total Products Supplied** | **16,538** | **17,563** | **(5.8)** | **16,516** | **(7.9)** | **16,465** | **(0.5)** | **15,961** | **(5.7)** |
| **Supply:** | | | | | | | | | |
| Domestic Production: | | | | | | | | | |
| Crude Oil (b) | 8,572 | 8,597 | (0.3) | 8,613 | 0.8 | 8,635 | 1.2 | 8,598 | (0.3) |
| Natural Gas Liquids | 1,581 | 1,564 | 1.1 | 1,601 | 3.9 | 1,582 | 4.6 | 1,561 | (1.2) |
| Other Supply | 496 | 715 | (30.6) | 619 | (18.4) | 609 | (23.4) | 587 | (13.2) |
| Total Domestic Supply | 10,649 | 10,876 | (2.1) | 10,833 | (0.1) | 10,826 | (0.1) | 10,746 | (1.2) |
| Imports: | | | | | | | | | |
| Crude Oil, Total | 4,182 | 5,177 | (19.2) | 3,902 | (16.1) | 3,993 | (14.6) | 4,069 | (24.2) |
| Canadian | 160 | 200 | (20.0) | 169 | (6.1) | 136 | (18.6) | 127 | (38.0) |
| Other | 4,022 | 4,977 | (19.2) | 3,733 | (16.5) | 3,857 | (14.4) | 3,938 | (23.7) |
| Products, Total | 1,543 | 1,611 | (4.2) | 1,525 | (11.0) | 1,484 | 4.7 | 1,320 | (8.3) |
| Residual Fuel Oil | 799 | 920 | (13.2) | 858 | (11.8) | 814 | (4.8) | 635 | (13.3) |
| Other | 744 | 691 | (7.7) | 667 | (10.0) | 670 | 19.0 | 685 | 3.3 |
| Total Imports | 5,725 | 6,788 | (15.7) | 5,427 | (14.7) | 5,477 | (10.1) | 5,385 | (20.9) |
| **Total Supply** | **16,374** | **17,664** | **(7.3)** | **16,260** | **(5.5)** | **16,303** | **(3.7)** | **16,131** | **(8.8)** |

(a) Included in motor gasoline total; (b) Includes lease condensate. Special notes: All 1981 data are preliminary. Also in Products Supplied, Department of Energy began using a new data collection system in 1981 dealing with reclassified products. These are deducted from domestic supplies to eliminate double counting.
Source: American Petroleum Institute, Monthly Statistical Reports.

## Refinery Operations (Add 000 b/d)

| | Full Year | | | 4th Quarter | | 3rd Quarter | | 2nd Quarter | |
|---|---|---|---|---|---|---|---|---|---|
| **Refinery Operations:** | 1981 | 1980 | %Chng. | 1981 | %Chng. vs. 1980 | 1981 | %Chng. vs. 1980 | 1981 | %Chng. vs. 1980 |
| Input to Crude Oil Distillation Units | 12,748 | 13,794 | (7.6) | 12,531 | (7.0) | 12,911 | (4.4) | 12,692 | (8.2) |
| Operable Capacity | 18,565 | 18,245 | 1.8 | 18,230 | (1.0) | 18,756 | 2.3 | 18,676 | 2.3 |
| Refinery Utilization (%) | 68.7% | 75.6% | (9.1) | 68.7% | (6.1) | 68.8% | (6.6) | 68.0% | (10.3) |
| Crude Oil Runs | 12,485 | 13,483 | (7.4) | 12,265 | (7.0) | 12,663 | (4.0) | 12,418 | (8.0) |

Source: American Petroleum Institute, Monthly Statement Reports.

## Crude and Product Inventories (As of 12/31) (Add 000)

| | Full Year | | | 4th Quarter | | 3rd Quarter | | 2nd Quarter | |
|---|---|---|---|---|---|---|---|---|---|
| **Stocks** | 1981 | 1980 | %Chng. | 1981 | %Chng. vs. 1980 | 1981 | %Chng. vs. 1980 | 1981 | %Chng. vs. 1980 |
| Crude Oil | 366.0 | 380.2 | (3.7) | 366.0 | (3.7) | 366.4 | (2.6) | 401.8 | 5.2 |
| Unfinished Oils | 109.6 | 123.7 | (11.4) | 109.6 | (11.4) | 118.5 | (10.3) | 127.8 | (4.0) |
| Motor Gasoline | 252.5 | 263.0 | (4.0) | 252.5 | (4.0) | 239.7 | (7.2) | 243.5 | (8.0) |
| Naptha-jet | 7.1 | 6.4 | 10.9 | 7.1 | 10.9 | 6.0 | (9.1) | 6.2 | 5.1 |
| Kerosine-jet | 32.4 | 35.9 | (9.7) | 32.4 | (9.7) | 36.5 | 2.8 | 37.3 | 2.8 |
| Kerosine | 11.0 | 11.4 | (3.5) | 11.0 | (3.5) | 13.6 | 5.4 | 13.1 | (5.8) |
| Distillate Fuel Oil | 190.2 | 205.4 | (7.4) | 190.2 | (7.4) | 210.2 | (9.5) | 178.2 | (9.0) |
| Residual Fuel Oil | 81.0 | 91.5 | (11.5) | 81.0 | (11.5) | 74.4 | (15.4) | 75.4 | (14.0) |
| All other oils | 207.6 | 199.9 | 3.9 | 207.6 | 3.9 | 182.2 | (14.0) | 226.4 | 13.3 |
| **Total, All Oils** | **1,257.4** | **1,317.4** | **(4.6)** | **1,257.4** | **(4.6)** | **1,247.7** | **(7.8)** | **1,309.7** | **(0.7)** |

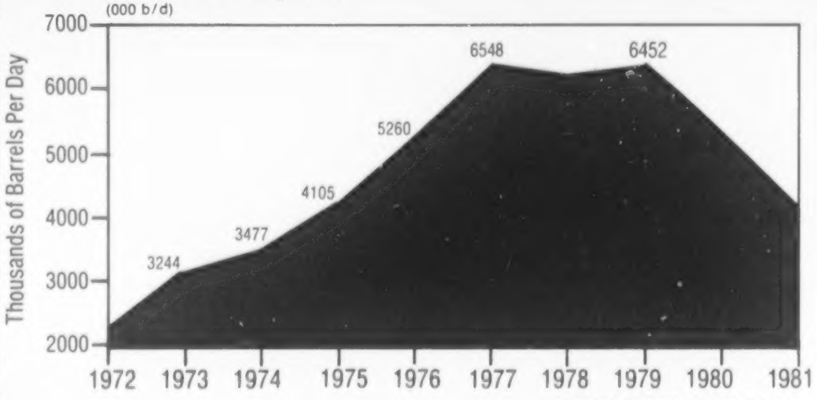
Source: American Petroleum Institute, Monthly Statement Reports.

## Domestic Supply Trend (Add 000,000 bbl.)

| Year | All products | Gasoline | Kerosine (a) | Distillate | Residual | LPG | Lubes | Other |
|---|---|---|---|---|---|---|---|---|
| 1981 (b) | 6,296 | 2,427 | | 1,168 | 807 | 410 | 56 | 1,041 |
| 1980 | 6,932 | 2,536 | 397 | 1,389 | 1,033 | 414 | 58 | 1,105 |
| 1979 | 6,758 | 2,568 | 388 | 1,210 | 1,032 | 456 | 66 | 1,038 |
| 1978 | 6,879 | 2,705 | 377 | 1,253 | 1,103 | 358 | 63 | 1,020 |
| 1977 | 6,710 | 2,633 | 350 | 1,223 | 1,121 | 369 | 58 | 956 |
| 1976 | 6,391 | 2,567 | 351 | 1,147 | 1,025 | 381 | 56 | 864 |
| 1975 | 5,958 | 2,436 | 347 | 1,041 | 899 | 362 | 50 | 823 |
| 1974 | 6,078 | 2,386 | 346 | 1,075 | 963 | 388 | 57 | 862 |
| 1973 | 6,317 | 2,453 | 386 | 1,124 | 1,030 | 404 | 59 | 851 |
| 1972 | 5,990 | 2,351 | 380 | 1,066 | 926 | 414 | 53 | 800 |
| 1971 | 5,552 | 2,213 | 385 | 971 | 838 | 369 | 49 | 727 |
| 1970 | 5,364 | 2,131 | 358 | 927 | 804 | 363 | 50 | 731 |
| 1969 | 5,159 | 2,042 | 354 | 900 | 722 | 373 | 49 | 720 |
| 1968 | 4,902 | 1,956 | 326 | 875 | 668 | 331 | 48 | 698 |
| 1967 | 4,584 | 1,843 | 289 | 818 | 652 | 344 | 44 | 594 |
| 1966 | 4,411 | 1,793 | 244 | 797 | 626 | 324 | 49 | 578 |
| 1965 | 4,202 | 1,720 | 220 | 776 | 587 | 307 | 47 | 545 |
| 1960 | 3,610 | 1,512 | 132 | 685 | 559 | 227 | 43 | 427 |

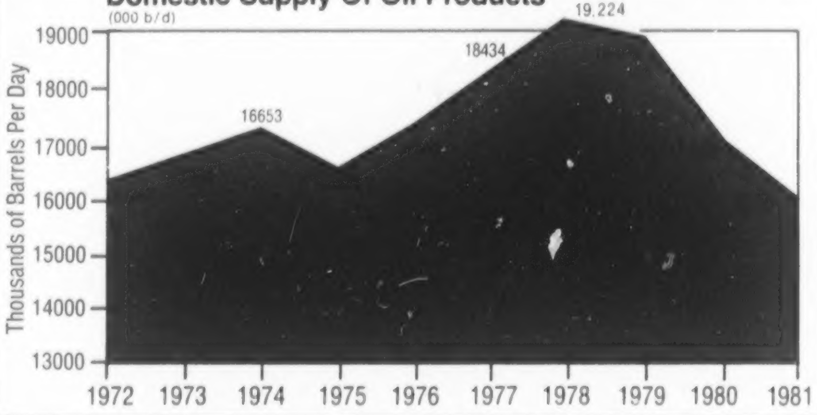
(a) Kerosine includes jet fuel; (b) Preliminary.
Source: Department of Energy, Energy Data Reports.
Figures for 1963 and thereafter are not strictly comparable to earlier years because of product reclassification resulting from separately reporting data for petrochemical feedstocks.

### Crude Oil Imports



Source: Department of Energy

### Domestic Supply Of Oil Products



**Consumer resistance** to higher prices and a determined conservation ethic, coupled with high interest rates, inflation and an economic recession, particularly in the last quarter of the year, caused a continuation of the downward sweep in oil production and consumption that started in 1980

In some ways, the slump was healthy for the American people. It reduced U.S. dependence on foreign oil tremendously with crude imports, for example, down 20% in 1981 and 37.5% below the peak years of 1977 and 1978.

But while imports declined, so did supplies which are roughly tantemount to consumption. Supplies slumped 6.2% in 1981. The gasoline and fuel oil markets were more than sated throughout the entire year, causing an erosion of prices and margins as marketers fought bitterly for customers and gallonage

The soft markets led to predictions that $1 a gal. regular grade gasoline would be available over most of the U.S. by the time summer driving season got underway. There was some hope—but not much conviction—that prices would firm up in the last half of the year.

A Department of Energy projection in the forepart of 1982 indicated that consumption would decline slightly for the year as a whole but would rise about 5% in 1983. That can only mean tight markets and stiff competition in 1982.

## Supply and Production, Principal Products

(Add 000 bbl.)

| | Motor Gasoline | Aviation Gasoline | Distillate Fuel Oil | Residual Fuel Oil | Jet Fuel (a) | Lubricants | Asphalt |
|---|---|---|---|---|---|---|---|
| Domestic Supply | | | | | | | |
| 1981 | 2,403,890 | 11,147 | 1,032,950 | 752,630 | 368,850 | 58,348 | 124,751 |
| 1980 | 2,401,335 | 13,088 | 1,046,090 | 915,420 | 389,820 | 58,400 | 147,515 |
| Production | | | | | | | |
| 1981 | 2,337,460 | 11,540 | 954,840 | 480,340 | 353,320 | 60,575 | 124,153 |
| 1980 | 2,369,580 | 12,923 | 971,265 | 576,700 | 364,635 | 65,158 | 144,052 |
| Imports | | | | | | | |
| 1981 | 62,780 | 0 | 60,955 | 290,540 | 13,870 | 3,069 | 1,427 |
| 1980 | 51,100 | 0 | 51,830 | 342,735 | 21,900 | 2,591 | 1,452 |

(a) Includes naphtha and kerosene-based jet fuels

Source: Department of Energy: Monthly Energy Review: March 1981

## U.S. Oil Imports (a)

(Add 000 b/d)

| Year | Crude Oil | Other Products | Residual Fuel Oil | Total Imports | % of Total Domestic Production |
|---|---|---|---|---|---|
| 1981 (b) | 4,150 | 740 | 800 | 5,690 | 66.4% |
| 1980 | 5,219 | 690 | 920 | 6,829 | 79.4 |
| 1979 | 6,452 | 786 | 1,151 | 8,389 | 76.9 |

(a) Does not include Strategic Petroleum Reserve. (b) Preliminary
Source: Department of Energy, Monthly Energy Review and IPAA

## Origins of U.S. Oil Imports

(Add 000 b/d)

| | Western Hemisphere | | | Eastern Hemisphere | | |
|---|---|---|---|---|---|---|
| Year | Canada | Venezuela | Other | Mid-East | Africa | Other |
| 1981 | 410 | 375 | 1,285 | 1,135 | 1,455 | 1,065 |
| 1980 | 435 | 460 | 1,631 | 1,565 | 2,915 | 781 |
| 1979 | 533 | 691 | 1,610 | 2,120 | 2,520 | 918 |

Source: Independent Petroleum Assn. of America

| | Total Well Completions | | | Proved Reserves | | | | Supply (Add 000 b/d) | |
|---|---|---|---|---|---|---|---|---|---|
| Year | Total (a) | Dry | % Dry | Crude Oil (b) | Crude Production/ Reserve Ratio | Natural Gas (c) | Natural Gas Production/ Reserve Ratio | Domestic Crude Production | Crude & Product Imports |
| 1981 (d) | 80,450 | 22,945 | 28.5% | NA | NA | NA | NA | 8,565 | 5,725 |
| 1980 | 62,462 | 18,089 | 28.9 | 29,805 | NA | 199.0 | NA | 8,597 | 6,787 |
| 1979 | 51,263 | 15,752 | 30.7 | 27,051 | 9.1 | 194.9 | 9.8 | 8,552 | 8,389 |

(a) Includes oil, gas, service and dry completions; (b) Millions of bbl.; (c) Trillions of cubic feet. (d) Preliminary

Source: Independent Petroleum Assn. of America and Department of Energy

# Supply/Demand Forecast for 1982

**Independent Petroleum Assn. of America,** in a revised forecast issued in the spring of 1982, anticipates another hefty decrease in oil demand before the year is out. The spring projection downgraded a slightly more optimistic forecast made in the fall of 1981 by its Supply and Demand Committee.

Here are highlights of IPAA's 1982 projections:

- Energy consumption will decline for the third consecutive year.
- Domestic oil demand will fall another 600,000 b/d to an average of 15.4-million b/d. This is in the wake of a drop of more than 1-million b/d in 1981.
- Demand for all major products will slip further in 1982 but at a more modest rate than in 1981.
- Oil imports will average 5.0-million b/d, down more than 700,000 b/d vis a vis 1981.
- Refinery utilization will continue to erode, averaging 12.0-million b/d versus the 1981 average of 12.4-million b/d.
- Crude oil production is expected to rise slightly.

Commenting on its domestic oil demand expectations, IPAA said: "The combined factors of a sluggish economy, the cumulative impact of previous large scale price increases, and the displacement by alternative fuels will continue to depress oil demand for the full year 1982."

As for gasoline, IPAA said: "Although demand was adversely affected by severe weather conditions in the first quarter, consumption is expected to strengthen throughout the remainder of the year. However, diesel penetration and increased mileage efficiency will keep consumption below last year's level."

Last winter's colder weather might normally have boosted fuel oil consumption but continued conservation and substitution by other fuels will more than offset such gains in 1982.

# The Outlook: Not Bleak But Not Rosy

(Add 000 b/d)

| | 1st Qtr. | 2nd Qtr. | 3rd Qtr. | 4th Qtr. | Year |
|---|---|---|---|---|---|
| **Domestic Product Demand:** | | | | | |
| Motor Gasoline | 6,098 | 6,563 | 6,627 | 6,505 | 6,450 |
| Aviation Fuels | 1,033 | 986 | 1,033 | 1,005 | 1,014 |
| Middle Distillates | 3,326 | 2,489 | 2,459 | 3,132 | 2,850 |
| Residual Fuel Oil | 2,149 | 1,767 | 1,804 | 1,963 | 1,920 |
| Liquified Gases | 1,677 | 1,247 | 1,234 | 1,602 | 1,439 |
| Other Products | 1,481 | 1,812 | 1,946 | 1,719 | 1,742 |
| **Total** | **15,764** | **14,864** | **15,103** | **15,926** | **15,415** |
| Exports: | 731 | 579 | 569 | 588 | 616 |
| **Total Demand:** | **16,495** | **15,443** | **15,672** | **16,514** | **16,031** |
| **Stock Change All Oils:** | **−983** | **+229** | **+92** | **−163** | **−203** |
| **Total Supply** | | | | | |
| **Domestic Production:** | | | | | |
| Crude Oil | 8,650 | 8,650 | 8,650 | 8,650 | 8,650 |
| Natural Gas Liquids | 1,548 | 1,539 | 1,534 | 1,564 | 1,546 |
| **Total** | **10,198** | **10,189** | **10,184** | **10,214** | **10,196** |
| **Required Imports:** | | | | | |
| Crude Oil (a) | 3,241 | 3,440 | 3,758 | 3,765 | 3,553 |
| Motor Gasoline | 153 | 162 | 165 | 156 | 159 |
| Aviation Fuels | 22 | 39 | 44 | 38 | 36 |
| Middle Distillates | 107 | 135 | 159 | 163 | 141 |
| Residual Fuel Oil | 827 | 631 | 714 | 772 | 736 |
| Liquified Gases | 276 | 164 | 152 | 215 | 202 |
| Other Products | 198 | 172 | 186 | 178 | 183 |
| **Total** | **4,824** | **4,743** | **5,178** | **5,287** | **5,010** |
| Other Supply | 490 | 740 | 402 | 850 | 622 |
| **Total Supply:** | **15,512** | **15,672** | **15,764** | **16,351** | **15,828** |
| **Closing Stocks:** (Million Barrels) | | | | | |
| Motor Gasoline | 249.4 | 235.0 | 233.0 | 230.0 | 230.0 |
| Aviation Fuels | 43.7 | 44.0 | 38.0 | 35.0 | 35.0 |
| Middle Distillates | 134.9 | 164.0 | 185.0 | 189.0 | 189.0 |
| Residual Fuel Oil | 56.8 | 53.0 | 53.0 | 57.0 | 57.0 |
| Liquified Gases | 120.3 | 142.0 | 155.0 | 137.0 | 137.0 |
| Other Products | 54.3 | 57.0 | 52.0 | 54.0 | 54.0 |
| **Total Products** | **659.4** | **695.0** | **716.0** | **702.0** | **702.0** |
| Unfinished Oils | 114.7 | 110.0 | 112.0 | 115.5 | 115.5 |
| Natural Gas Liquids | 14.9 | 15.5 | 16.0 | 16.5 | 16.5 |
| Crude Oil (a) | 380.7 | 370.0 | 355.0 | 350.0 | 350.0 |
| **Total All Oils:** | **1,169.7** | **1,190.5** | **1,199.0** | **1,184.0** | **1,184.0** |
| **Crude Runs to Stills:** | **11,409** | **12,130** | **12,148** | **12,481** | **12,045** |

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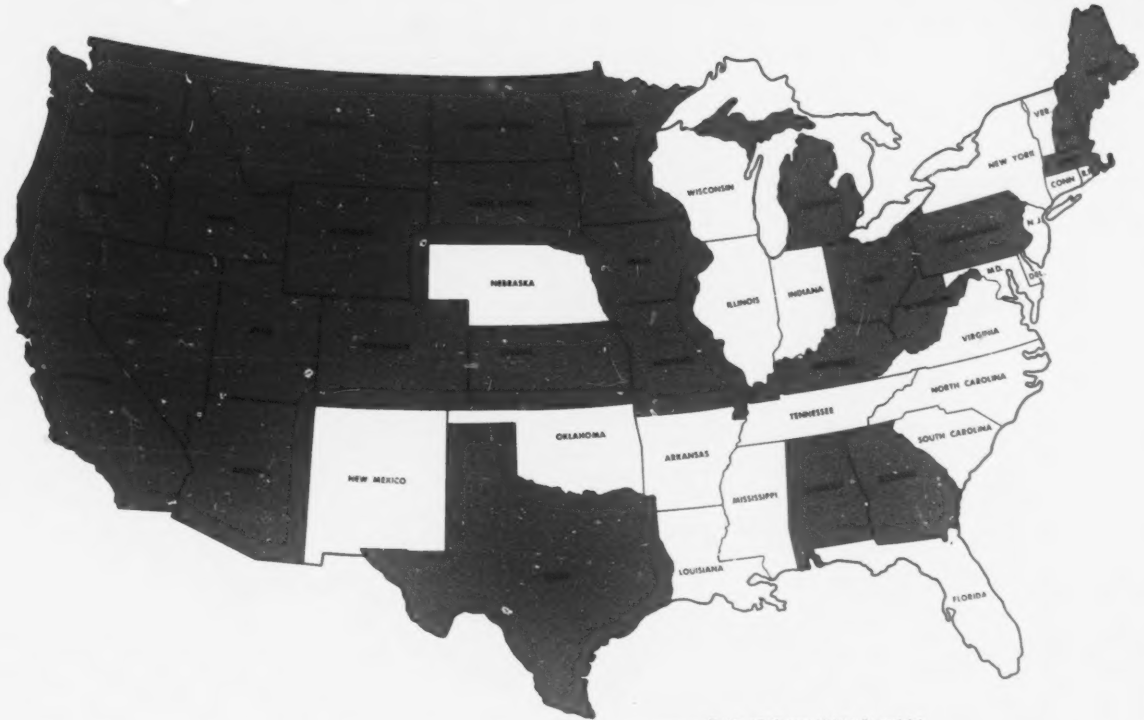
(a) Excludes imports for and stocks in U.S. Strategic Storage.

Source: Independent Petroleum Assn. of America, Supply & Demand Forecast, May, 1982.



▨ States which constitutionally prohibit diversion of motor fuel taxes to non-highway uses.

☐ States which have no such provisions.

## State Tax Collections — 1981

| State | Gasoline tax rates per gal. (a) 12/31/81 | Total state motor fuel tax revenues (Add 000) 1981(b) | 1980 | % Change |
|---|---|---|---|---|
| Alabama | 11.0¢ | $2,126,341 | $2,206,933 | -3.7% |
| Alaska | 8.0 | 180,049 | 181,368 | -0.7 |
| Arizona | 8.0 | 1,446,963 | 1,510,862 | -4.2 |
| Arkansas | 9.5 | 1,303,034 | 1,341,523 | -2.9 |
| California | 7.0 | 11,330,390 | 11,898,945 | -4.8 |
| Colorado | 9.0 | 1,528,776 | 1,575,052 | -2.9 |
| Connecticut | 11.0 | 1,327,964 | 1,386,526 | -4.2 |
| Delaware | 11.0 | 305,283 | 316,975 | -3.8 |
| Dist. of Columbia | 11.0 | 175,291 | 183,236 | -4.4 |
| Florida | 8.0 | 4,838,540 | 5,116,312 | -5.4 |
| Georgia | 7.5 | 3,086,487 | 3,241,344 | -4.8 |
| Hawaii | 8.5 | 345,733 | 323,943 | 6.8 |
| Idaho | 11.5 | 504,578 | 497,027 | 1.4 |
| Illinois | 7.5 | 5,102,930 | 5,097,283 | 0.1 |
| Indiana | 10.5 | 3,054,646 | 3,114,800 | -1.9 |
| Iowa | 13.0 | 1,714,616 | 1,659,494 | 3.4 |
| Kansas | 8.0 | 1,443,548 | 1,441,541 | 0.2 |
| Kentucky | 9.0 | 1,867,177 | 1,946,370 | -4.1 |
| Louisiana | 8.0 | 2,211,334 | 2,301,738 | -3.9 |
| Maine | 9.0 | 532,013 | 556,030 | -4.3 |
| Maryland | 9.0 | 1,957,794 | 2,045,297 | -4.3 |
| Massachusetts | 9.8 | 2,291,485 | 2,383,588 | -3.9 |
| Michigan | 11.0 | 4,108,255 | 4,394,324 | -6.5 |
| Minnesota | 13.0 | 2,139,238 | 2,157,856 | -0.9 |
| Mississippi | 9.0 | 1,317,197 | 1,351,940 | -2.6 |
| Missouri | 7.0 | 2,763,325 | 2,796,780 | -1.2 |
| Montana | 9.0 | 523,232 | 515,126 | 1.6 |
| Nebraska | 13.6 | 950,508 | 898,214 | 5.8 |
| Nevada | 10.5 | 533,054 | 549,548 | -3.1 |
| New Hampshire | 14.0 | 407,339 | 425,986 | -4.5 |
| New Jersey | 8.0 | 3,348,705 | 3,440,820 | -2.6 |
| New Mexico | 9.0 | 843,962 | 888,188 | -5.1 |
| New York | 8.0 | 5,569,766 | 5,692,735 | -2.2 |
| North Carolina | 12.5 | 3,086,132 | 3,165,685 | -2.5 |
| North Dakota | 8.0 | 455,518 | 403,588 | 12.6 |
| Ohio | 10.3 | 5,368,283 | 5,427,886 | -1.1 |
| Oklahoma | 6.5 | 2,013,945 | 1,977,639 | 1.8 |
| Oregon | 8.0 | 1,471,538 | 1,515,296 | -2.9 |
| Pennsylvania | 11.0 | 5,070,441 | 5,318,187 | -4.7 |
| Rhode Island | 12.0 | 380,232 | 381,269 | -0.3 |
| South Carolina | 13.0 | 1,674,770 | 1,735,033 | -3.5 |
| South Dakota | 13.0 | 463,754 | 424,224 | 9.4 |
| Tennessee | 9.0¢ | 2,623,250 | 2,713,802 | -3.3% |
| Texas | 5.0 | 8,735,415 | 8,823,385 | -1.0 |
| Utah | 11.0 | 788,209 | 767,608 | 2.6 |
| Vermont | 11.0 | 249,987 | 260,437 | -3.8 |
| Virginia | 11.0 | 2,717,465 | 2,827,581 | -3.9 |
| Washington | 13.5 | 1,970,632 | 2,034,750 | -3.1 |
| West Virginia | 10.5 | 903,712 | 952,838 | -5.1 |
| Wisconsin | 13.0 | 2,314,361 | 2,353,821 | -1.7 |
| Wyoming | 8.0 | 438,071 | 438,941 | -0.2 |
| **Total** | | **$111,904,998** | **$114,959,854** | **-2.7%** |

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(a) Tax rate for highway use: does not include federal or local taxes. (b) Preliminary.
Source: Federal Highway Administration, Table 5580-2, October 1981, Issued April, 1982

## Federal Collections (Add 000)

| Year | Gasoline (a) | Diesel and special fuels (a) | Lube oil (b) | Total |
|---|---|---|---|---|
| 1981 (c) | $4,047,114 | $560,973 | $101,222 | $4,709,309 |
| 1980 | 4,019,481 | 518,352 | 78,835 | 4,616,668 |
| 1980 | 3,897,059 | 522,554 | 76,901 | 4,496,514 |
| 1979 | 4,282,919 | 508,595 | 82,335 | 4,873,849 |
| 1978 | 4,381,950 | 488,064 | 79,047 | 4,949,061 |
| 1977 | 4,229,721 | 452,631 | 78,830 | 4,761,182 |
| 1976 | 4,140,924 | 408,560 | 70,135 | 4,619,619 |
| 1975 | 3,884,483 | 362,675 | 66,124 | 4,313,282 |
| 1974 | 3,854,505 | 373,302 | 78,155 | 4,305,962 |
| 1973 | 3,958,682 | 358,120 | 86,266 | 4,403,068 |
| 1972 | 3,736,545 | 321,551 | 85,841 | 4,143,937 |
| 1971 | 3,513,927 | 275,159 | 67,130 | 3,856,216 |
| 1970 | 3,408,505 | 264,815 | 65,862 | 3,739,182 |
| 1969 | 3,172,243 | 240,650 | 86,338 | 3,499,231 |

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(a) 4¢ gal.; (b) 6¢ gal.; (c) Figures for 1981 are fiscal year gross collections that went to the Highway Trust Fund, since net IRS calendar year information was not available. All other figures represent calendar year net collections after refunds and include the taxes the federal government pays on its own purchases.
Source: U.S. Department of Transportation, Federal Highway Administration.

# Outlook for Tires and Batteries at Stations

| Year | Replacement passenger tire shipments: Total (in millions) | Station sales (a) (in millions) | Average per station (a) | Replacement automotive-type battery shipments: Total (in millions) | Station sales (a) (in millions) | Average per station (a) |
|---|---|---|---|---|---|---|
| 1981 | 125 | 25.0 | 164 | 53.6 | 16.1 | 106 |
| 1980 | 107 | 21.4 | 135 | 50.0 | 15.0 | 95 |
| 1979 | 122 | 24.4 | 148 | 53.7 | 16.1 | 102 |
| 1978 | 135 | 27.0 | 157 | 56.3 | 16.9 | 102 |
| 1977 | 130 | 26.0 | 148 | 54.6 | 16.4 | 95 |
| 1976 | 123 | 24.6 | 132 | 49.2 | 14.8 | 84 |
| 1975 | 125 | 23.7 | 125 | 42.6 | 12.7 | 67 |
| 1974 | 124 | 24.8 | 127 | 44.4 | 13.3 | 68 |
| 1973 | 142 | 28.4 | 130 | 43.5 | 13.1 | 60 |
| 1972 | 140 | 28.0 | 127 | 43.2 | 13.0 | 59 |
| 1971 | 135 | 27.0 | 123 | 39.1 | 11.7 | 53 |
| 1970 | 130 | 26.0 | 118 | 37.9 | 11.4 | 51 |
| 1969 | 129 | 25.8 | 117 | 35.5 | 10.7 | 48 |
| 1968 | 121 | 24.2 | 110 | 33.8 | 10.1 | 46 |

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(a) Estimates based on service stations holding 20% of the replacement market, and 30% of the replacement battery market; (b) In 1977, Rubber Manufacturers Assn. changed its base and eliminated motorcycle tires from the passenger tire shipments; all data, including that of 1976, have been restated to reflect this change; in addition, service-station totals have been revised to reflect a population of 184,400 in 1976; 176,465 in 1977; 172,230 in 1978; 164,752 in 1979; 157,997 in 1980; and 156,000 in 1981—all estimates from 1978 on. Tire and battery totals otherwise from Rubber Manufacturers Assn. and Battery Council International.

# Battery Shipments Move Up Again

**Battery shipments** (replacement and original equipment) rose in 1981 for the first time in three years, according to Battery Council International and Motor Vehicle Manufacturers Assn. Total shipments were up 7.06%, with all of it coming from the replacement market. Original equipment installations were slightly below the 1980 level.

(Add 000)

| Year | Replacements | % of Market | New cars & trucks | % of Market | Total market | % Change from previous year |
|---|---|---|---|---|---|---|
| 1981 | 53,598 | 87.1% | 7,956 | 12.9% | 61,554 | 6.0% |
| 1980 | 50,063 | 86.2 | 8,009 | 13.8 | 58,072 | −11.0 |
| 1979 | 53,746 | 82.4 | 11,480 | 17.6 | 65,226 | −6.2 |
| 1978 | 56,389 | 81.4 | 12,910 | 18.6 | 69,299 | 3.0 |
| 1977 | 54,601 | 81.2 | 12,639 | 18.8 | 67,240 | 10.8 |
| 1976 | 49,202 | 81.0 | 11,477 | 19.0 | 60,679 | 17.6 |
| 1975 | 42,582 | 82.5 | 8,985 | 17.6 | 51,567 | −5.3 |
| 1974 | 44,408 | 81.5 | 10,058 | 18.5 | 54,466 | −2.9 |
| 1973 | 43,453 | 77.5 | 12,637 | 22.5 | 56,090 | 2.9 |
| 1972 | 43,220 | 79.3 | 11,271 | 20.7 | 54,491 | 9.5 |
| 1971 | 39,144 | 78.6 | 10,638 | 21.4 | 49,782 | 9.1 |
| 1970 | 37,389 | 81.9 | 8,239 | 18.1 | 45,628 | 0.5 |

Source: Replacement battery figures supplied by Battery Council International. New cars and trucks are U.S. factory sales figures provided by Motor Vehicle Manufacturers Assn.

# Replacement Batteries

**Total replacement battery** shipment aggregated 53.6-million units in 1981, with 12-volt and 6-volt automotive batteries accounting for 91.1% of the total, according to Battery Council International in its annual sales and activity report.

### Replacement Batteries

Passenger cars and light trucks:

12-Volt: 42,790,227, or 80.4% of the total; 6-volt: 1,529,009, or 2.9% of the total.

Heavy duty commercial:

12-Volt: 2,211,450, or 4.2% of the total; 6-Volt: 1,934,968, or 3.6% of the total.

### Original Equipment

Passenger cars and light trucks:

12-Volt: 8,661,210, or 86.4% of the total; 6-Volt: 42,750, or 0.4% of the total.

Heavy duty commercial:

12-Volt: 591,342, or 5.9% of the total; 6-Volt: 133,746, or 1.3% of the total.

Source: Battery Council International.

# Where Batteries Are Sold

Shipment in Units

| Channel of Distribution | 1981 (a) Private Brands | 1981 (a) Mfr.'s Own Brand | 1981 (a) Total | 1980 (a) Private Brands | 1980 (a) Mfr.'s Own Brand | 1980 (a) Total |
|---|---|---|---|---|---|---|
| Gasoline & Oil | 2,678,353 | 407,476 | 3,035,829 | 2,667,835 | 596,112 | 3,263,947 |
| Tires & Rubber | 1,569,843 | 750,740 | 2,320,583 | 1,451,328 | 736,840 | 2,188,168 |
| Mass Merchandisers (Department and Discount Stores) | 14,255,477 | 140,915 | 14,396,392 | 12,763,850 | 121,527 | 12,885,377 |
| Mass Merchandisers (Auto Chains and Others) | 4,133,712 | 791,568 | 4,925,280 | 4,136,500 | 486,758 | 4,623,258 |
| Fleet Operations | 5,513 | 308,712 | 314,225 | 41,192 | 246,444 | 287,636 |
| Vehicle & Equipment Manufacturers | 1,994,248 | 381,826 | 2,376,074 | 1,829,552 | 398,095 | 2,227,647 |
| Parts Distributors | 4,143,845 | 5,775,519 | 9,919,364 | 3,943,757 | 5,948,407 | 9,892,164 |
| Battery Specialists | 9,774,679 | 4,330,742 | 14,105,421 | 8,655,413 | 4,080,345 | 12,735,758 |
| Others | 115,249 | 656,571 | 771,820 | 99,323 | 637,754 | 737,007 |
| **Total** | **38,670,919** | **13,544,069** | **52,214,988** | **35,588,750** | **13,252,282** | **48,841,032** |

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(a) Figures based on 20 reporting members.

Source: Battery Council International.

## Tire Shipments Rise in '81

**Almost surprisingly,** tire shipments showed moderate increases in 1981 in all areas except replacement and exports of farm implement equipment. Even though passenger car sales were dismal in 1981, shipments of original equipment tires were up 3.5% while those in the replacement market jumped 18.7%. Similarly, truck and bus tires also were up in 1981—8.3% for original equipment and 15.6% for replacements. This marked a surprising upswing over 1980, which was the poorest in the industry in almost 25 years.

## How 1981 Compared With 1980

| | Passenger | Truck | Farm | Total by Type of Market |
|---|---|---|---|---|
| Original Equipment . . . | 3.5% | 8.3% | 1.8% | 4.1% |
| Replacement . . . . . . . . . | 18.7 | 15.6 | −35.1 | 17.3 |
| Export . . . . . . . . . . . . . . | 1.0 | 11.4 | −15.6 | 3.1 |
| **Total by Type** . . . . . | **14.6%** | **15.1%** | **−20.8%** | **13.8%** |

Source: NPN based on Rubber Manufacturers Assn. Statistical Report.

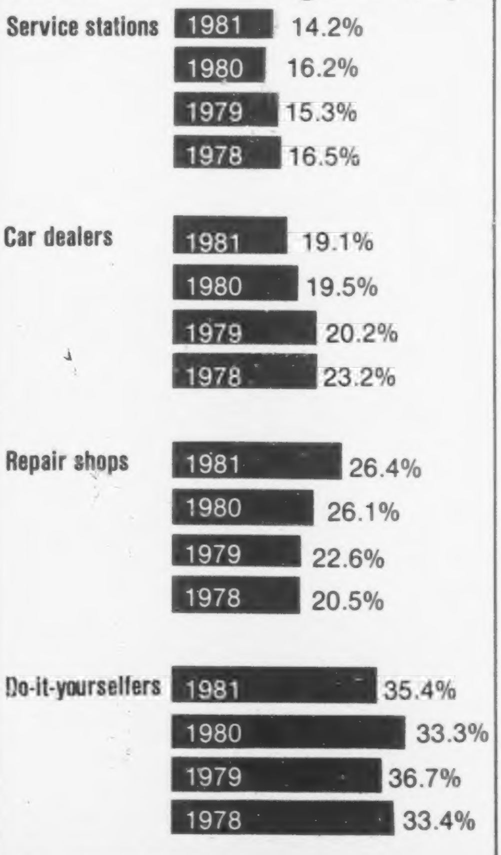
## Auto, Truck and Farm Tire Shipments

(Add 000)

| | Type of Tire | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Passenger/ Motorcycle | % of Market | Bus/ Truck | % of Market | Farm Implement | % of Market | Total of Market Type | % of Total |
| **1981** | | | | | | | | |
| Original Equipment . . . . . . . . . . . . . . . | 36,167 | 83.2% | 5,732 | 13.2% | 1,597 | 3.7% | 43,496 | 21.1% |
| Replacement . . . . . . . . . . . . . . . . . . . . | 126,915 | 80.8 | 28,453 | 18.1 | 1,661 | 1.0 | 157,029 | 76.1 |
| Export . . . . . . . . . . . . . . . . . . . . . . . . . | 4,113 | 69.2 | 1,661 | 27.9 | 173 | 2.9 | 5,947 | 2.9 |
| **Total** . . . . . . . . . . . . . . . . . . . . . . . . | **167,195** | **81.0%** | **35,846** | **17.4%** | **3,431** | **1.7%** | **206,472** | |
| **1980** | | | | | | | | |
| Original Equipment . . . . . . . . . . . . . . . | 34,933 | 83.6% | 5,294 | 12.3% | 1,569 | 3.8% | 41,796 | 23.0% |
| Replacement . . . . . . . . . . . . . . . . . . . . | 106,912 | 79.9 | 24,539 | 18.2 | 2,560 | 2.0 | 133,831 | 73.8 |
| Export . . . . . . . . . . . . . . . . . . . . . . . . . | 4,074 | 70.6 | 1,491 | 25.8 | 205 | 3.6 | 5,770 | 3.2 |
| **Total** . . . . . . . . . . . . . . . . . . . . . . . . | **145,919** | **80.4%** | **31,144** | **17.2%** | **4,334** | **2.4%** | **181,397** | |

Source: Rubber Manufacturers Assn. Statistical Report.

## Where consumers get tuneups



Source: Champion Spark Plug Co.

## Antifreeze Sales

(Add 000 gal.)

| Year | Type | | Total |
|---|---|---|---|
| | Ethylene glycol | Methanol | |
| 1980 . . . . . . . . . . | 184,340 | (*) | 184,340 |
| 1979 . . . . . . . . . . | 154,240 | (*) | 154,240 |
| 1978 . . . . . . . . . . | 137,161 | (*) | 137,161 |
| 1977 . . . . . . . . . . | 142,308 | (*) | 142,308 |
| 1976 . . . . . . . . . . | 143,332 | (*) | 143,332 |
| 1975 . . . . . . . . . . | 217,675 | (*) | 217,675 |
| 1974 . . . . . . . . . . | 186,936 | (*) | 186,936 |
| 1973 . . . . . . . . . . | 208,540 | (*) | 208,540 |
| 1972 . . . . . . . . . . | 200,703 | (*) | 200,703 |
| 1971 . . . . . . . . . . | 192,647 | 430 | 193,607 |
| 1970 . . . . . . . . . . | 177,606 | 455 | 178,061 |
| 1969 . . . . . . . . . . | 163,484 | 743 | 164,226 |
| 1968 . . . . . . . . . . | 152,438 | 1,138 | 153,576 |
| 1967 . . . . . . . . . . | 142,190 | 1,500 | 143,690 |

(*) Survey no longer conducted.
Source: Chemical Specialties Manufacturers Assn.

## Ethylene Glycol-Base Antifreeze Sales—1980

| | (Add 000 gal.) | |
|---|---|---|
| | Civilian | Government |
| Packaged ethylene glycol antifreeze sold in: | | |
| quarts and gallons . . . . . . . . . . . | 107,168 | NA |
| drums . . . . . . . . . . . . . . . . . . . . . . | 8,881 | NA |
| Bulk ethylene glycol antifreeze (or ethylene glycol for antifreeze) sold to packagers . . . . . . . . . . . . . . . . . . . | 49,547 | NA |
| Bulk ethylene glycol antifreeze (or ethylene glycol for antifreeze) sold to motor-vehicle manufacturers for "drive-away" or factory-fill use . . . . . . . . . . . . . . . . . . . . . | 15,922 | NA |
| **Total** . . . . . . . . . . . . . . . . . . . . . . | **181,518** | **NA** |

Source: Chemical Specialties Manufacturers Assn.

# Auto Products and Services Continue Up

**Even though the pace** slowed down a bit, sales of automotive products and services continued their upward swing in 1981 and seemed headed for higher levels in 1982 and thereafter, according to the 1982 edition of "Franchising in the Economy," a yearbook issued by the Bureau of Industrial Economics of the U.S. Department of Commerce.

Total sales in 1981 were 6.7% higher than the preceding year and the forecast for 1982 indicates they would climb another 9.7% this year. The number of establishments also is scheduled to rise in 1982 after two or three years of a relative flattening-out process. This year's total is expected to exceed 43,000 units. This is not as high as had been anticipated last year; nevertheless it is a significant upswing after the doldrums of recent years.

Average sales per establishment were higher in 1981 and are still moving up this year. As might be expected, sales in company-owned stores represent the lion's share of the business.

## Automotive Products and Services (a)

| | 1982 (b) | 1981 (b) | 1980 |
|---|---|---|---|
| Total number of establishments: | 43,151 | 40,739 | 40,210 |
| Company-owned | 4,351 | 4,220 | 4,221 |
| Franchisee-owned | 38,800 | 36,519 | 35,989 |
| Total sales of products and services: ($000) (c) | $8,289,963 | $7,555,599 | $7,083,836 |
| Company-owned (c) | 2,599,526 | 2,399,872 | 2,265,366 |
| Franchisee-owned (c) | 5,690,437 | 5,155,727 | 4,818,470 |
| Average sales per establishment (c) | $193,000 | $185,000 | $176,000 |
| Company-owned | 597,000 | 569,000 | 537,000 |
| Franchisee-owned | 147,000 | 141,000 | 134,000 |
| Employment | N.A. | N.A. | 173,705 |
| Company-owned | N.A. | N.A. | 36,300 |
| Franchisee-owned | N.A. | N.A. | 137,405 |

(a) Includes tire, battery and accessory stores; auto and truck wash services; and brake and muffler repair and services; (b) Data estimated by respondents; (c) Includes sales of non-automotive products such as household appliances, garden supplies, etc.

Source: "Franchising in the Economy, 1980-1982," Bureau of Industrial Economics, U.S. Department of Commerce.

# Drain Intervals

## 1982 Crankcase Drain Intervals and Recommended Oil

| | | Normal Service | | Severe Service | | |
|---|---|---|---|---|---|---|
| Make | Engine | Miles | Months | Miles | Months | Type of Oil |
| American Motors | All | 7,500 | 7.5 | — | — | SF |
| Chrysler<br>Dodge<br>Plymouth | All | 7,500 | 12 | 3,000 | 3 | SF |
| Ford | — | — | — | — | — | — |
| Lincoln | 4 (Turbo) | 6,000 | 12 | 3,000 | 3 | SF<br>SF-CC<br>SF-CD |
| Mercury | Others | 7,500 | 12 | 3,000 | 3 | SF<br>SF-CC<br>SF-CD |
| General Motors | Gasoline | 7,500 | 12 | 3,000 | 3 | SF<br>SF-CC<br>SF-CD |
| | Diesel | 5,000 | — | 5,000 | — | SF-CC<br>SF-CD |

Source: Gousha-ChekChart.

## 1982 Automatic Transmission Fluids and Drain Recommendations

| | | Normal Service | | Severe Service | |
|---|---|---|---|---|---|
| Make | Fluid | Months | Miles | Months | Miles |
| American Motors | Dexron II | — | (c) | 30 | 30,000 |
| Chrysler | Dexron II (a) | — | (c) | — | 15,000 |
| Ford | Dexron II | — | (c) | — | — |
| | | — | (c) | 22½ | 22,500 |
| General Motors | Dexron II (b) | — | 100,000 | — | 15,000 |

(a) Including automatic transaxles (both sumps). Interval is for transmission sump.

(b) Including automatic transaxles.

(c) Drain not required for normal service.

## 1982 Chassis Lubrication Intervals

| | Normal Service | | Severe Service | | | |
|---|---|---|---|---|---|---|
| Make | Months | Miles | Month | Miles | Type | Part Specification No. |
| American Motors | 15 (a) | 15,000 (a) | Shorter Intervals | | #2 Lithium | 8991230 |
| Chrysler | 36 | 30,000 | 18 | 15,000 | #2 Barium EP | 2525035 |
| Ford | 30 | 30,000 | Shorter Intervals | | #2 Lithium (suspension)<br>#4-5 Lithium (steering) | MIC75-B<br>MIC92-AII |
| General Motors | 12 (b) | 7,500 (b) | Shorter Intervals | | #1-2 Multipurpose EP | 6031-M |

(a) Eagle steering linkage: 7.5 months/12,500 miles.

(b) Diesel engine cars: 12 months or 5,000 miles.

Source: Gousha-ChekChart. Reprinted with permission.

# 1981 Service Job Analysis offers exclusive aftermarket profile

**Here's another first** for NPN's 1982 Factbook: key data from the 1981 Service Job Analysis, the sixth in a series of triennial aftermarket studies conducted by Hunter Publishing Co. The 1981 SJA—the most detailed and comprehensive analysis of traditional aftermarket activity ever undertaken—reports on over 250 service jobs performed, plus parts, chemicals and accessories used or sold nationally by approximately 323,000 service stations, independent repair shops, new car and truck dealer service departments and self-serviced fleet repair locations servicing 25 or more truck-type vehicles. (Not included in the SJA are figures for discount stores, home and auto chains or other non-traditional outlets.)

The table below presents data on the total service jobs performed or products sold during calendar 1981 by traditional outlets. It also shows totals by individual market segments, along with the percentage of jobs performed by each market segment. The categories shown were specifically selected to reflect the type of service activity or products normally of interest to petroleum marketers.

Data is presented for a total of 120,000 service stations (those with repair facilities), 136,000 repair shops, 28,000 car/truck service departments, and 39,000 fleet repair locations.

The information developed for the 1981 SJA was gathered through Hunter's Micromarket Research Panel, a national aftermarket panel comprising almost 5,000 members of representative segments of the Traditional Automotive Service industry.

## Total Jobs Performed by ALL SHOPS (Universe—323,000 Shops)

| | | . . . by Type of Outlet (add 000) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Job Description | Total Jobs Performed (add 000) | Service Stations | % of Jobs | Independent Repair Shops | % of Jobs | New Car/Truck Dealer Shops | % of Jobs | Self-Serviced Fleet Shops | % of Jobs |
| Lube Jobs (Car) | 119,570 | 63,829 | 53.4 | 23,643 | 19.8 | 29,135 | 24.4 | 2,963 | 2.5 |
| Lube Jobs (Truck/Bus) | 26,610 | 8,450 | 31.8 | 4,177 | 15.7 | 3,756 | 14.1 | 10,227 | 38.4 |
| Oil Changes (Car/Truck) | 149,794 | 75,884 | 50.7 | 28,256 | 18.9 | 34,223 | 22.8 | 11,431 | 7.6 |
| Oil Filters Replaced (Car/Truck) | 142,334 | 69,650 | 48.9 | 28,884 | 20.3 | 31,768 | 22.3 | 12,059 | 8.5 |
| Air Filters Replaced | 50,040 | 23,053 | 46.1 | 14,367 | 28.7 | 8,728 | 17.4 | 3,892 | 7.8 |
| Carburetors Installed (New) | 1,460 | 557 | 38.2 | 600 | 41.1 | 192 | 13.2 | 111 | 7.6 |
| Carburetors Installed (Rebuilt) | 1,717 | 836 | 48.7 | 483 | 28.1 | 270 | 12.2 | 188 | 10.9 |
| Carburetors Cleaned on Vehicles | 7,920 | 3,431 | 43.3 | 2,663 | 33.6 | 1,456 | 18.4 | 370 | 4.7 |
| Carburetors Overhauled (In Shop) | 8,083 | 1,718 | 21.3 | 3,835 | 47.4 | 2,013 | 24.9 | 517 | 6.4 |
| Fuel Pumps Installed (New) | 4,365 | 1,476 | 33.8 | 1,864 | 42.7 | 746 | 17.1 | 279 | 6.4 |
| Fuel Pumps Installed (Rebuilt) | 1,181 | 514 | 43.5 | 353 | 29.9 | 205 | 17.4 | 109 | 9.2 |
| Fuel Filters Replaced | 41,965 | 13,496 | 32.2 | 15,344 | 36.6 | 8,457 | 20.2 | 4,668 | 11.1 |
| Engine Tune-Ups (Car) | 46,291 | 15,767 | 34.1 | 17,477 | 37.8 | 11,870 | 25.6 | 1,177 | 2.5 |
| Engine Tune-Ups (Truck/Bus) | 9,701 | 1,871 | 55.1 | 3,345 | 34.5 | 2,062 | 21.3 | 2,423 | 25.0 |
| Spark Plugs (New) | 297,412 | 95,091 | 32.0 | 122,753 | 41.3 | 63,786 | 21.4 | 15,782 | 5.3 |
| Spark Plugs (Clnd/Regapped/Reinstalled) | 31,812 | 12,133 | 38.1 | 11,411 | 35.9 | 4,599 | 14.5 | 3,669 | 11.5 |
| Batteries Sold | 21,540 | 10,736 | 49.8 | 5,729 | 26.6 | 2,641 | 12.3 | 2,434 | 11.3 |
| Batteries Recharged | 37,384 | 22,773 | 60.6 | 8,344 | 22.2 | 3,602 | 9.6 | 2,865 | 7.6 |
| Battery Cables Sold | 12,721 | 6,631 | 52.1 | 3,567 | 28.0 | 1,362 | 10.7 | 1,161 | 9.1 |
| Alternators Installed (New) | 1,620 | 666 | 41.1 | 524 | 32.3 | 277 | 17.1 | 153 | 9.4 |
| Alternators Installed (Rebuilt) | 10,995 | 4,686 | 42.6 | 4,332 | 39.4 | 1,055 | 9.6 | 922 | 8.4 |

# Total Jobs Performed (cont.'d)

| | | ... by Type of Outlet (add 000) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Job Description | Total Jobs Performed (add 000) | Service Stations | % of Jobs | Independent Repair Shops | % of Jobs | New Car/Truck Dealer Shops | % of Jobs | Self-Serviced Fleet Shops | % of Jobs |
| Voltage Regulators Installed (New) | 6,665 | 2,442 | 36.6 | 2,661 | 39.9 | 1,171 | 17.6 | 391 | 5.9 |
| Voltage Regulators Installed (Reblt) | 764 | 269 | 35.2 | 286 | 37.4 | 124 | 16.2 | 85 | 11.1 |
| V-Belts Installed (All Types) | 45,580 | 21,908 | 48.1 | 14,488 | 31.8 | 5,570 | 12.2 | 3,614 | 7.9 |
| Radiator Hose Replaced (Rubber) | 20,219 | 9,908 | 49.0 | 6,302 | 31.2 | 2,573 | 12.7 | 1,436 | 7.1 |
| Radiator Hose Replaced (Silicone) | 853 | 356 | 41.7 | 136 | 15.9 | 151 | 17.7 | 210 | 24.6 |
| Heater Hose Replaced (Rubber) | 14,390 | 5,972 | 41.5 | 5,725 | 39.8 | 1,575 | 10.9 | 1,118 | 7.8 |
| Heater Hose Replaced (Silicone) | 871 | 275 | 31.6 | 314 | 36.1 | 153 | 17.6 | 129 | 14.8 |
| Permanent Anti-Freeze Sold (Gals) | 67,581 | 30,408 | 45.0 | 17,238 | 25.5 | 10,913 | 16.1 | 9,022 | 13.3 |
| Mufflers Replaced (Car) | 11,461 | 5,083 | 44.4 | 4,572 | 39.9 | 1,590 | 13.9 | 216 | 1.9 |
| Mufflers Replaced (Truck/Bus) | 2,808 | 638 | 22.7 | 1,161 | 41.3 | 305 | 10.9 | 704 | 25.1 |
| Tires Sold (Car-New) | 30,070 | 19,354 | 64.4 | 7,362 | 24.5 | 2,729 | 9.1 | 625 | 2.1 |
| Tires Sold (Truck/Bus-New) | 4,039 | 1,671 | 41.4 | 1,000 | 24.8 | 278 | 6.9 | 1,090 | 27.0 |
| Retread Tires Sold (Car) | 3,802 | 1,929 | 50.7 | 1,238 | 32.6 | 260 | 6.8 | 375 | 9.9 |
| Retread Tires Sold (Truck/Bus) | 1,525 | 449 | 29.4 | 499 | 32.7 | 48 | 3.1 | 529 | 34.7 |
| Tires Repaired | 71,665 | 57,142 | 79.7 | 8,219 | 11.5 | 1,033 | 1.4 | 5,274 | 7.4 |
| Tubes Sold (New) | 6,054 | 4,153 | 68.6 | 1,322 | 21.8 | 98 | 1.6 | 481 | 7.9 |
| Tubes Repaired | 9,065 | 5,676 | 62.6 | 1,398 | 15.4 | 119 | 1.3 | 1,872 | 20.7 |
| Engine Oil Additives Sold (Cans) | 14,824 | 8,795 | 59.3 | 2,633 | 17.8 | 2,767 | 18.7 | 629 | 4.2 |
| Gasoline Additives Sold (Cans) | 18,333 | 12,309 | 67.1 | 3,023 | 16.5 | 2,121 | 11.6 | 880 | 4.8 |
| Gear Lube Additives Sold (Cans) | 2,700 | 1,246 | 46.1 | 640 | 23.7 | 624 | 23.1 | 190 | 7.0 |
| Transmission Additives Sold (Cans) | 5,306 | 3,018 | 56.9 | 1,716 | 32.3 | 507 | 9.6 | 65 | 1.2 |
| Cooling System Additives Sold (Cans) | 14,114 | 7,111 | 50.4 | 3,782 | 26.8 | 1,756 | 12.4 | 1,465 | 10.4 |
| Cooling System Cleaner Sold (Cans) | 7,541 | 4,228 | 56.1 | 1,606 | 21.3 | 1,253 | 16.6 | 454 | 6.0 |
| Cooling System Sealer Sold (Cans) | 9,417 | 6,550 | 69.6 | 1,841 | 19.5 | 707 | 7.5 | 319 | 3.4 |
| Windshield Wiper Motors Repl. (New) | 1,073 | 248 | 23.1 | 267 | 24.9 | 345 | 32.2 | 213 | 19.9 |
| Windshield Wiper Motors Repl. (Reblt) | 1,077 | 373 | 34.6 | 463 | 43.0 | 97 | 9.0 | 144 | 13.4 |
| Windshield Wiper Arms Replaced | 2,757 | 1,010 | 36.6 | 730 | 26.5 | 477 | 17.3 | 540 | 19.6 |
| Windshield Wiper Refills Installed | 34,614 | 21,132 | 61.1 | 7,634 | 22.1 | 4,044 | 11.7 | 1,804 | 5.2 |
| Windshield Wiper Blades Replaced | 21,889 | 10,527 | 48.1 | 5,145 | 23.5 | 3,464 | 15.8 | 2,753 | 12.6 |
| Windshield Washer Pumps Replaced | 2,759 | 1,073 | 38.9 | 1,053 | 38.2 | 457 | 16.6 | 176 | 6.4 |
| Wash Jobs (Car-Automatic) | 28,931 | 16,897 | 58.4 | 4,923 | 17.0 | 6,054 | 20.9 | 1,057 | 3.7 |
| Wash Jobs (Truck/Bus-Automatic) | 7,751 | 563 | 7.3 | 197 | 2.5 | 992 | 12.8 | 5,999 | 77.4 |
| Engines Steam Cleaned (External) | 6,331 | 888 | 14.0 | 1,350 | 21.3 | 1,902 | 30.0 | 2,191 | 34.6 |
| Gasoline Sold (Gals) | 51,064,560 | 40,661,810 | 79.5 | 4,316,250 | 8.5 | 1,308,090 | 2.6 | 4,778,410 | 9.4 |
| Diesel Fuel Sold (Gals) | 622,229 | 260,152 | 41.8 | 58,449 | 9.4 | 10,916 | 1.8 | 292,712 | 47.0 |
| Engine Oil Sold (Qts) | 1,057,419 | 574,393 | 54.3 | 192,569 | 18.2 | 146,263 | 13.8 | 144,194 | 13.6 |
| Gasoline Pumps (Number) | 765 | 651 | 85.1 | 54 | 7.1 | 6 | .8 | 54 | 7.9 |
| Service Bays (Number) | 1,297 | 271 | 20.9 | 518 | 39.9 | 32.9 | 25.4 | 179 | 13.8 |

# 1981 SJA shows service station TBA and repair activity

**Fewer stations, more business** per station. That's a capsule view of the national service station market in 1981, according to Hunter Publishing Co.'s 1981 Service Job Analysis.

The figures shown here were selected from the major categories of repair and service activity among service stations as reported in Hunter's exclusive 1981 SJA report. The table presents total service jobs performed or products sold by the 120,000 service stations projected for 1981 by Hunter's Micromarket research. As defined in the SJA, these are stations with service bays, with a minimum of one full-time mechanic per station.

Although the total number of stations doing repair and service dropped from 145,000 in 1978 (the figure shown in the previous SJA), average dollar volume per station showed a significant increase in 1981 over 1978. In 1981, repair and maintenance work accounted for $108,700 per station, including sales of parts, accessories and labor at retail. This total is 33% higher than the 1978 figure of $81,700 per station and more than double the 1975 total of $51,800.

The figures below show total number of jobs performed in each category and the percentage of stations performing that category of service. In addition, totals in each service job are shown for all nine U.S. Census Regions.

## Jobs Performed by SERVICE STATIONS (Universe—120,000 Stations)

| | | | ... by Census Region (add 000) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Job Number and Description** | % Stations Performing | Total Jobs Performed (add 000) | New England | Middle Atlantic | East North Central | West North Central | South Atlantic | East South Central | West South Central | Mountain | Pacific |
| Lube Jobs (Car) | 98.4 | 63,829 | 2,417 | 7,505 | 12,006 | 5,469 | 9,991 | 3,328 | 7,859 | 2,127 | 13,127 |
| Lube Jobs (Truck/Bus) | 67.9 | 8,450 | 385 | 774 | 1,414 | 945 | 1,516 | 568 | 824 | 715 | 1,309 |
| Oil Changes (Car) | 96.6 | 68,121 | 2,838 | 8,167 | 12,568 | 6,020 | 10,688 | 3,447 | 8,065 | 2,250 | 14,078 |
| Oil Filters Replaced (Car) | 97.0 | 63,019 | 2,752 | 7,713 | 11,417 | 6,095 | 9,869 | 3,333 | 6,994 | 2,111 | 12,735 |
| Air Filters Replaced | 86.1 | 23,053 | 1,508 | 2,867 | 4,450 | 1,954 | 3,952 | 732 | 2,780 | 1,137 | 3,673 |
| Front Wheels Repacked (Car) | 84.3 | 11,602 | 424 | 1,495 | 2,697 | 1,108 | 1,701 | 374 | 1,321 | 678 | 1,804 |
| Oil Changes (Truck/Bus) | 65.8 | 7,763 | 365 | 914 | 1,090 | 809 | 1,412 | 427 | 844 | 703 | 1,199 |
| Oil Filters Replaced (Truck/Bus) | 63.1 | 6,631 | 287 | 746 | 895 | 658 | 1,097 | 550 | 546 | 461 | 1,391 |
| Carburetors Installed (New) | 24.3 | 557 | 54 | 134 | 122 | 23 | 60 | 4 | 31 | 26 | 103 |
| Carburetors Installed (Rebuilt) | 32.6 | 836 | 82 | 198 | 165 | 49 | 114 | 15 | 45 | 19 | 149 |
| Carburetors Cleaned on Vehicles | 44.8 | 3,431 | 300 | 533 | 1,323 | 250 | 314 | 17 | 161 | 149 | 384 |
| Carburetors Overhauled (In Shop) | 42.9 | 1,718 | 103 | 155 | 377 | 134 | 376 | 41 | 157 | 191 | 184 |
| Fuel Pumps Installed (New) | 52.7 | 1,476 | 71 | 183 | 354 | 176 | 200 | 4 | 178 | 120 | 190 |
| Fuel Pumps Installed (Rebuilt) | 18.0 | 514 | 18 | 75 | 83 | 51 | 135 | 58 | 23 | 23 | 48 |
| Fuel Filters Replaced | 84.2 | 13,496 | 982 | 2,108 | 3,835 | 1,161 | 1,589 | 250 | 891 | 1,123 | 1,557 |
| Engine Tune-Ups (Car) | 87.9 | 15,767 | 1,118 | 2,318 | 4,004 | 1,175 | 2,667 | 318 | 1,184 | 586 | 2,397 |
| Engine Tune-Ups (Truck/Bus) | 41.4 | 1,871 | 166 | 170 | 361 | 177 | 430 | 11 | 81 | 151 | 324 |
| Spark Plugs (New) | 82.3 | 95,091 | 6,381 | 18,562 | 24,218 | 6,998 | 13,843 | 1,727 | 6,278 | 3,352 | 13,732 |
| Spark Plugs (Clnd/Regapped/Reinstalled) | 24.8 | 12,133 | 1,557 | 1,389 | 4,680 | 334 | 1,432 | 257 | 215 | 266 | 2,003 |
| Batteries Sold | 94.4 | 10,736 | 583 | 1,327 | 1,797 | 1,059 | 1,666 | 572 | 1,278 | 645 | 1,809 |
| Batteries Recharged | 97.1 | 22,773 | 952 | 3,687 | 3,500 | 1,434 | 4,070 | 935 | 2,992 | 1,168 | 4,035 |
| Battery Cables Sold | 82.7 | 6,631 | 372 | 781 | 1,076 | 618 | 1,188 | 278 | 789 | 349 | 1,180 |

## Jobs Performed by SERVICE STATIONS (cont'd.)

| | | | ... by Census Region (add 000) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Job Number and Description** | % Stations Performing | Total Jobs Performed (add 000) | New England | Middle Atlantic | East North Central | West North Central | South Atlantic | East South Central | West South Central | Mountain | Pacific |
| Alternators Installed (New) | 16.6 | 666 | 6 | 78 | 163 | 28 | 138 | 15 | 100 | 19 | 119 |
| Alternators Installed (Rebuilt) | 73.0 | 4,686 | 306 | 817 | 1,000 | 348 | 792 | 128 | 293 | 282 | 720 |
| Voltage-Regulators Installed (New) | 61.4 | 2,442 | 189 | 440 | 334 | 168 | 324 | 208 | 149 | 185 | 445 |
| Voltage-Regulators Installed (Reblt) | 7.3 | 269 | 16 | 7 | 138 | 22 | 23 | 40 | 6 | 2 | 15 |
| V-Belts Installed (All Types) | 92.4 | 21,908 | 1,282 | 3,123 | 3,893 | 2,136 | 4,078 | 807 | 2,559 | 965 | 3,065 |
| Radiator Hose Replaced (Rubber) | 87.7 | 9,908 | 574 | 1,461 | 1,654 | 808 | 2,063 | 532 | 1,250 | 328 | 1,238 |
| Heater Hose Replaced (Rubber) | 76.8 | 5,972 | 1,329 | 573 | 705 | 570 | 943 | 160 | 588 | 338 | 766 |
| Permanent Anti-Freeze Sold (Gals) | 90.6 | 30,408 | 1,828 | 5,161 | 6,053 | 2,789 | 4,965 | 1,105 | 2,309 | 2,224 | 3,974 |
| Mufflers Replaced (Car) | 78.2 | 5,083 | 322 | 787 | 959 | 403 | 804 | 187 | 1,214 | 75 | 332 |
| Mufflers Replaced (Truck/Bus) | 24.5 | 638 | 34 | 84 | 150 | 104 | 138 | 4 | 17 | 26 | 81 |
| Tires Sold (Car-New) | 86.3 | 19,354 | 1,119 | 2,177 | 3,586 | 2,786 | 3,076 | 636 | 1,732 | 1,274 | 2,968 |
| Tires Sold (Truck/Bus-New) | 24.9 | 1,671 | 124 | 108 | 279 | 276 | 155 | 15 | 109 | 386 | 219 |
| Retread Tires Sold (Car) | 22.4 | 1,929 | 181 | 397 | 137 | 127 | 554 | 89 | 4 | 180 | 260 |
| Retread Tires Sold (Truck/Bus) | 5.5 | 449 | 22 | 55 | 39 | 45 | 82 | — | 10 | 132 | 64 |
| Tires Repaired | 96.9 | 57,142 | 2,703 | 5,768 | 9,691 | 7,408 | 8,518 | 3,874 | 10,359 | 2,685 | 6,136 |
| Tubes Sold (New) | 66.6 | 4,153 | 139 | 367 | 636 | 624 | 504 | 220 | 750 | 448 | 465 |
| Tubes Repaired | 78.8 | 5,676 | 135 | 398 | 599 | 702 | 799 | 358 | 1,633 | 708 | 344 |
| Engine Oil Additives Sold (Cans) | 68.3 | 8,795 | 302 | 1,118 | 1,168 | 820 | 1,707 | 428 | 1,380 | 460 | 1,412 |
| Gasoline Additives Sold (Cans) | 70.1 | 12,309 | 821 | 2,064 | 1,839 | 1,304 | 1,688 | 353 | 1,398 | 1,149 | 1,693 |
| Gear Lube Additives Sold (Cans) | 19.2 | 1,246 | 70 | 102 | 141 | 66 | 205 | 7 | 278 | 193 | 184 |
| Transmission Additives Sold (Cans) | 50.6 | 3,018 | 89 | 355 | 455 | 336 | 624 | 34 | 471 | 191 | 463 |
| Cooling System Additives Sold (Cans) | 68.6 | 7,111 | 303 | 732 | 1,712 | 887 | 1,384 | 117 | 530 | 340 | 1,106 |
| Cooling System Cleaner Sold (Cans) | 60.2 | 4,228 | 169 | 624 | 727 | 283 | 945 | 116 | 383 | 211 | 770 |
| Cooling System Sealer Sold (Cans) | 72.6 | 6,550 | 370 | 800 | 1,375 | 439 | 1,224 | 264 | 630 | 197 | 1,251 |
| Windshield Wiper Arms Replaced | 35.2 | 1,010 | 152 | 171 | 121 | 49 | 164 | 24 | 39 | 49 | 241 |
| Windshield Wiper Refills Installed | 86.2 | 21,132 | 1,232 | 2,869 | 4,047 | 1,946 | 3,628 | 1,214 | 1,709 | 879 | 3,608 |
| Windshield Wiper Blades Replaced | 76.2 | 10,527 | 627 | 1,763 | 2,001 | 1,100 | 1,943 | 347 | 762 | 449 | 1,535 |
| Windshield Washer Pumps Replaced | 37.4 | 1,073 | 89 | 238 | 351 | 56 | 161 | 31 | 37 | 33 | 77 |
| Engines Steam Cleaned (External) | 19.2 | 888 | 63 | 90 | 76 | 64 | 157 | 6 | 281 | 25 | 126 |
| Gasoline Sold (Gals) | 100.0 | 40,661,810 | 2,306,450 | 4,966,000 | 6,668,330 | 2,855,240 | 6,883,510 | 2,161,360 | 5,320,320 | 1,802,220 | 7,698,380 |
| Diesel Fuel Sold (Gals) | 18.0 | 260,152 | 9,257 | 11,176 | 25,301 | 50,846 | 41,474 | 22,534 | 28,934 | 31,164 | 39,466 |
| Engine Oil Sold (Qts) | 95.0 | 574,393 | 28,034 | 62,461 | 103,664 | 48,885 | 98,887 | 40,601 | 56,167 | 23,022 | 112,672 |
| Gasoline Pumps (Number) | 98.2 | 651 | 32 | 76 | 123 | 57 | 98 | 45 | 70 | 34 | 116 |
| Service Bays (Number) | 96.5 | 271 | 15 | 40 | 50 | 23 | 43 | 14 | 33 | 13 | 40 |

# Oil Jobbers and TBA: A 1982 Profile

**In January of 1982,** Hunter Publishing Co. made a major study of oil jobbers to (1) establish a current profile of the American oil jobbers and (2) gauge the jobber's involvement in the automotive TBA business.

This 1982 profile is appearing for the first time in the NPN FACTBOOK. Working with Great Lakes Marketing, an independent research firm, Hunter mailed detailed questionnaires to 2,112 domestic oil jobbers in January and received 1,219 usable responses—a well-above-average response rate of 57.7%. The survey sample was carefully designed to reflect the geographic distribution of the total jobber universe.

The new study emphatically confirms that oil jobbing is a big dollar volume business today. As the tables show, 44% of all oil jobbers have an annual volume over $5-million and 27% report a volume in excess of $10-million. Only 13% report dollar volumes below the $1-million mark.

The average jobber in the Hunter/NPN sample supplies 20.7 service stations. Of these, 27.5% are owned and operated by the jobber, 18.4% are owned and leased to others.

Jobbers deliver a mean average of 1,216,600 gal. of gasoline per month. The average jobber owns and operates 16.8 vehicles, including delivery units and passenger cars.

## Jobber Annual Sales Volume

| Sales Volume | Number of Respondents | % of Respondents |
|---|---|---|
| Under $500,000 | 51 | 4.7% |
| $500,000-$1 million | 91 | 8.3 |
| $1-$3 million | 297 | 27.2 |
| $3-$5 million | 165 | 15.1 |
| $5-$10 million | 195 | 17.9 |
| Over $10 million | 292 | 26.8 |

## Monthly Gasoline Deliveries *(All outlets)*

| Gal. Delivered Per Month (Add 000) | Number of Respondents | % of Respondents |
|---|---|---|
| Under 60 | 142 | 14.8% |
| 60-99.9 | 105 | 10.9 |
| 100-199 | 150 | 15.8 |
| 200-299 | 108 | 11.2 |
| 300-399 | 76 | 7.9 |
| 400-499 | 65 | 6.8 |
| 500-699 | 92 | 9.5 |
| 700-999 | 60 | 6.3 |
| 1,000-1,999 | 86 | 8.9 |
| 2,000-2,999 | 26 | 2.7 |
| 3,000-9,999 | 37 | 3.9 |
| 10,000 and over | 12 | 1.3 |
| **Mean Average** | | **1,216,600** |

## Number of Stations Supplied

| Number of Stations | Number of Respondents | % of Respondents |
|---|---|---|
| None | 166 | 13.5% |
| 1-4 | 349 | 28.6 |
| 5-9 | 222 | 18.2 |
| 10-14 | 135 | 11.1 |
| 15-19 | 96 | 7.9 |
| 20-29 | 88 | 7.2 |
| 30-39 | 51 | 4.3 |
| 40-49 | 30 | 2.4 |
| 50 and Over | 82 | 6.8 |
| **Average** | | **20.7 Stations Supplied** |

## Jobber Owned and Operated Stations

| Number of Stations | Number of Respondents | % of Respondents |
|---|---|---|
| None | 513 | 42.0% |
| 1 | 283 | 23.1 |
| 2 | 104 | 8.5 |
| 3 | 70 | 5.7 |
| 4 | 48 | 3.9 |
| 5 | 31 | 2.5 |
| 6 | 20 | 1.6 |
| 7 | 19 | 1.6 |
| 8 | 18 | 1.5 |
| 9 | 8 | .7 |
| Over 10 | 105 | 8.9 |
| **Mean Average** | | **5.7** |

## Jobber Owned Leased Stations

| Number of Stations | Number of Respondents | % of Respondents |
|---|---|---|
| None | 692 | 56.7% |
| 1 | 137 | 11.2 |
| 2 | 95 | 7.8 |
| 3 | 55 | 4.5 |
| 4 | 43 | 3.5 |
| 5 | 37 | 3.0 |
| 6 | 30 | 2.5 |
| 7 | 15 | 1.2 |
| 8 | 16 | 1.3 |
| 9 | 13 | 1.1 |
| Over 10 | 86 | 7.2 |
| **Mean Average** | | **3.8** |

## Independently Owned Stations Supplied

| Number of Stations | Number of Respondents | % of Respondents |
|---|---|---|
| None | 427 | 34.9% |
| 1 | 132 | 10.8 |
| 2 | 95 | 7.8 |
| 3 | 67 | 5.5 |
| 4 | 68 | 5.6 |
| 5 | 47 | 3.9 |
| 6 | 43 | 3.5 |
| 7 | 33 | 2.7 |
| 8 | 31 | 2.5 |
| 9 | 23 | 1.9 |
| 10 and Over | 253 | 20.9 |
| **Mean Average** | | **9.3** |

# Jobber-TBA Profile (continued)

**Part II of the study** indicates that approximately 60% of all jobbers surveyed handle one or more TBA line. About one third of these TBA-handling jobbers report annual TBA sales of under $20,000; but another third sell over $100,000 per year in TBA lines, and 6.5% have annual TBA sales of $500,000 and over. TBA accounts for 8.5% of total dollar volume for the average TBA-handling jobber.

As would be expected, jobber involvement in TBA is heavy in oil and filters (46% of all jobbers carry these items); spark plugs (24%); windshield wiper refills (26.9%); ignition point sets (19.4%); belts (26%); radiator hose (22.5%); batteries (37.5%); lamps (26.6%); sealed beam headlights (27.2%); thermostats (20.6%); antifreeze (56.2%); and additives (26.8%).

The percentage of all jobbers handling shock absorbers (17.8%); mufflers (12.9%); brake shoes and pads (14.1%); oil and grease seals (13.3%); wire and cable products (13.3%); and air conditioning Freon (13.1%) is also substantial.

## Jobbers Handling Minimum One TBA Line

| Total Response | | Northeast | | North Central | | South | | West | |
|---|---|---|---|---|---|---|---|---|---|
| No. | % | No. | % | No. | % | No. | % | No. | % |
| 720 | 60.6 | 48 | 37.8 | 268 | 64.6 | 254 | 59.9 | 131 | 69.7 |

## Annual TBA Sales Volume *(TBA Handling Jobbers)*

| Annual TBA Sales Volume | Number of Respondents | % of Respondents |
|---|---|---|
| $ 1,000-19,999 | 164 | 33.2% |
| 20,000-29,999 | 42 | 8.5 |
| 30,000-39,999 | 28 | 5.7 |
| 40,000-49,999 | 16 | 3.2 |
| 50,000-99,999 | 85 | 17.2 |
| 100,000-199,999 | 73 | 14.7 |
| 200,000-499,999 | 54 | 10.9 |
| 500,000 and Over | 32 | 6.5 |
| **Mean Average** | | **$258,349** |

## TBA Percentage of Total Sales

| TBA % of Total Jobber Sales | Number of Respondents | % of Respondents |
|---|---|---|
| 1% | 174 | 36.3% |
| 2 | 49 | 10.2 |
| 3 | 23 | 4.8 |
| 4 | 15 | 3.1 |
| 5 | 61 | 12.7 |
| 6 | 5 | 1.0 |
| 7 | 7 | 1.5 |
| 8 | 11 | 2.3 |
| 9 | 4 | .8 |
| 10 | 51 | 10.6 |
| Over 10 | 79 | 16.3 |
| **Mean Average** | | **8.5%** |

## Jobber TBA Customer Types

| Customer Type | Number of Respondents | % of Respondents (a) | % of TBA Sales Volume (b) |
|---|---|---|---|
| Service Stations Your Firm Owns & Operates | 318 | 61.0% | 34.1% |
| Service Stations Your Firm Owns & Leases | 226 | 43.4 | 17.4 |
| Other Service Stations | 240 | 46.1 | 17.2 |
| Repair Garages | 119 | 22.8 | 3.4 |
| Auto Parts Jobbers | 47 | 9.0 | 1.7 |
| Car/Truck Dealers | 61 | 11.7 | 1.2 |
| Retail Auto Parts Stores | 47 | 9.0 | 1.5 |
| Fleets | 109 | 20.9 | 4.2 |
| Farms | 162 | 31.1 | 9.5 |
| Marines | 17 | 3.3 | .2 |
| Other | 53 | 10.1 | 9.5 |

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(a) Column three refers to the numbers cited in column two.
(b) Column four refers exclusively to those who sell to the given customer type.
Source: NP -Hunter Publishing Co., April, 1982.

# U.S. Refineries and Capacities by States

## (Crude Oil Operating Capacity on Jan. 1, 1981)

| Company | b/d |
|---|---|
| **Alabama** | |
| **Coral Petroleum (formerly Vulcan Asphalt Refining Co.),** Tuscaloosa | 10,000 |
| **Hunt Oil Co.,** Tuscaloosa | 35,000 |
| **Louisiana Land & Exploration Co.,** Mobile | 41,300 |
| **Marion Corp.,** Theodore | 25,000 |
| **Mobile Bay Refining Co.,** Chickasaw | 28,100 |
| **Warrior Asphalt Co. of Alabama,** Holt | 5,000 |
| **Total** | **144,400** |
| **Alaska** | |
| **Atlantic Richfield Co.,** North Pole | 14,200 |
| **Chevron U.S.A.,** Kenai | 22,000 |
| **Earth Resources Co. of Alaska,** North Pole | 38,000 |
| **Tesoro Petroleum Corp.,** Kenai | 48,500 |
| **Total** | **122,700** |
| **Arizona** | |
| **Arizona Fuels Corp.,** Fredonia | 6,000 |
| **Total** | **6,000** |
| **Arkansas** | |
| **Berry Petroleum Co., a subsidiary of Crystal Oil Co.,** Stephens | 4,000 |
| **Cross Oil & Refining Co. of Arkansas,** Smackover | 9,700 |
| **Mcmillan Ring-Free Oil Co.,** Norphlet | 4,400 |
| **Tosco Corp.,** El Dorado | 47,000 |
| **Total** | **65,100** |
| **California** | |
| **Anchor Refining Co. (formerly Sierra Anchor Refining Co.),** McKittrick | 10,000 |
| **Atlantic Richfield Co.,** Carson | 212,000 |
| **Beacon Oil Co.,** Hanford | 17,300 |
| **Champlin Petroleum Co.,** Wilmington | 60,000 |
| **Chevron U.S.A.,** Bakersfield | 26,000 |
| El Segundo | 390,000 |
| | *15,000 |
| Richmond | 294,000 |
| | *71,000 |
| **Coastal Petroleum Co.,** Paloma | 10,200 |
| **Conoco (formerly Continental Oil Co.),** Paramount | 46,500 |
| Santa Maria | 9,500 |
| **Demenno Resources,** Compton | 15,000 |
| **ECO Petroleum, Inc.,** Long Beach | 11,000 |
| **Edgington Oil Co.,** Long Beach | 29,500 |
| **Exxon Co. U.S.A.,** Benecia | 102,000 |
| **Fletcher Oil & Refining Co.,** Carson | 29,500 |
| **Getty Refining & Marketing Co. (formerly Mohawk Petroleum Corp.),** Bakersfield | 40,900 |
| **Gibson Oil & Refining Co.,** Bakersfield | 4,600 |
| **Golden Eagle Refining Co., Inc.,** Carson | 16,170 |
| **Gulf Oil Co. U.S.,** Santa Fe Springs | 51,500 |
| **Huntway Refining Co.,** Wilmington | 5,500 |
| **Kern County Refinery, Inc.,** Bakersfield | 21,400 |
| **Lunday-Thagard Oil Co.,** South Gate | 12,000 |
| **Mcmillan Ring-Free Oil Co.,** Long Beach | 12,200 |
| **Marlex Oil & Refining, Inc. (formerly Basin Petroleum, Inc.),** Long Beach | 19,000 |
| **Mobil Oil Corp.,** Torrance | 123,500 |
| **Newhall Refining Co.,** Newhall | 17,600 |
| **Oxnard Refinery,** Oxnard | 4,000 |
| **Pacific Refining Co., a subsidiary of Coastal States Gas Corp.,** Hercules | 85,000 |
| **Powerine Oil Co.,** Santa Fe Springs | 44,120 |
| **Quad Refining Corp.,** Bakersfield | 7,000 |
| **Road Oil Sales Inc.,** Bakersfield | 3,000 |
| **Sabre Refining, Inc.,** Bakersfield | 10,000 |
| **San Joaquin Refining Co.,** Bakersfield | 12,000 |
| **Shell Oil Co.,** Martinez | 91,400 |
| | *12,600 |
| Wilmington | 93,000 |
| **Sunland Refining Corp.,** Bakersfield | 15,000 |
| **Texaco Inc.,** Wilmington | 75,000 |
| **Tosco Corp.,** Avon | 126,000 |
| | *11,000 |
| Bakersfield | 40,000 |
| **U.S.A. Petrochem Corp.,** Ventura | 24,000 |
| **Union Oil Co. of California** | |
| Arroyo Grande | 41,000 |
| Rodeo | 70,000 |
| Wilmington | 108,000 |
| **West Coast Oil Co.,** Oildale | 21,000 |
| **Witco Chemical Corp.,** Oildale | 11,000 |
| **Total** | **2,475,490** |
| **Colorado** | |
| **Asamera Oil (U.S.),** Commerce City | 40,000 |
| **Conoco (formerly Continental Oil Co.),** Commerce City | 10,100 |
| **Gary Refining Co.,** Fruita | 13,100 |
| **Total** | **63,200** |
| **Delaware** | |
| **Getty Refining & Marketing Co.,** Delaware City | 140,000 |
| **Total** | **140,000** |
| **Florida** | |
| **Manatee Energy Co.,** Manatee | 0 |
| | *28,400 |
| **Seminole Refining, Inc.,** St. Marks | 13,000 |
| **Total** | **13,000** |
| **Georgia** | |
| **Amoco Oil Co.,** Savannah | 24,000 |
| **Young Refining Corp.,** Douglasville | 5,000 |
| **Total** | **29,000** |
| **Hawaii** | |
| **Chevron U.S.A.,** Honolulu | 48,000 |
| **Total** | **48,000** |
| **Illinois** | |
| **Amoco Oil Co.,** Wood River | 104,000 |
| **Bi-Petro Inc.,** Pana | *6,200 |
| **Clark Oil & Refining Corp.,** Blue Island | 66,500 |
| Hartford | 63,600 |
| **Dillman Oil Recovery, Inc.,** Robinson | 1,200 |
| **Energy Development, Inc. (formerly M.T. Richards),** Crossville | 1,000 |
| **Marathon Oil Corp.,** Robinson | 120,000 |
| | *75,000 |
| **Mobil Oil Co.,** Joliet | 180,000 |
| **Shell Oil Co.,** Wood River | 283,000 |
| **Texaco Inc.,** Lawrenceville | 84,000 |
| Lockport | 72,000 |
| **Union Oil Co. of California,** Lemont | 151,000 |
| **Wireback Oil Co.,** Plymouth | 1,800 |
| **Total** | **1,128,100** |
| **Indiana** | |
| **Amoco Oil Co.,** Whiting | 380,000 |
| **Energy Cooperative, Inc.,** East Chicago | 126,000 |
| **Gladieux Refinery, Inc.,** Fort Wayne | 15,500 |
| **Indiana Farm Bureau Cooperative Association,** Mt. Vernon | 20,600 |
| **Indiana Refining, Inc. (formerly Princeton Refining, Inc.),** Princeton | 0 |
| | *5,000 |
| **Industrial Fuel & Asphalt of Indiana, Inc.,** Hammond | 0 |
| | *7,600 |
| **Kentucky Oil & Refining Co.,** Troy | 1,500 |
| **Laketon Asphalt Refining Co.,** Laketon | 8,500 |
| **Rock Island Refining Corp.,** Indianapolis | 43,200 |
| **Total** | **595,300** |
| **Kansas** | |
| **CRA, Inc.,** Coffeyville | 56,500 |
| Phillipsburg | 26,400 |
| **Derby Refining Co., (subsidiary of Coastal States Petroleum Co.)** North Wichita | 27,982 |
| **E-Z Serv Refining, Inc.,** Shallow Water | 9,500 |
| **Getty Refining & Marketing Co.,** El Dorado | 80,577 |
| **Mid-America Refining Co.,** Chanute | 3,000 |
| **Mobil Oil Corp.,** Augusta | 50,000 |
| **National Cooperative Refinery Association,** McPherson | 57,000 |
| **Pester Refining Co.,** El Dorado | 22,550 |
| **Phillips Petroleum Co.,** Kansas City | 80,000 |
| **Total Petroleum, Inc.,** Arkansas City | 42,500 |
| **Total** | **456,009** |
| **Kentucky** | |
| **Ashland Oil, Inc.,** Catlettsburg | 213,400 |
| Louisville | 25,200 |
| **Kentucky Oil & Refining Co.,** Betsy Lane | 3,000 |
| **Somerset Refinery, Inc.,** Somerset | 5,000 |
| **Total** | **246,600** |
| **Louisiana Inland** | |
| **Atlas Processing Co., a Subsidiary of Pennzoil Co.,** Shreveport | 45,000 |
| **Bayou State Oil Corp.,** Hosston | 5,000 |
| **Calumet Refining Co., a Div. of Calumet Industries, Inc.,** Princeton | 2,400 |
| **Claiborne Gasoline Co.,** Lisbon | 6,500 |
| **Cotton Valley Solvents Co.,** Cotton Valley | 8,000 |
| **Kerr-McGee Corp.,** Dubach | 10,780 |
| **Port Petroleum, Inc.,** Stonewall | 3,600 |
| **Schulze Processing, Inc.,** Tallulah | 1,760 |
| **Total** | **83,040** |
| **Louisiana Gulf** | |
| **Bruin Refining, Inc.,** St. James | 19,300 |
| **Calcasieu Refining, Ltd.,** Lake Charles | 16,000 |
| **Canal Refining Co.,** Church Point | 8,000 |
| **Cities Service Co.,** Lake Charles | 291,000 |
| **Conoco (formerly Continental Oil Co.),** Egan | 15,500 |
| Westlake | 156,500 |
| **Evangeline Refining Co.,** Jennings | 5,000 |
| **Exxon Co. U.S.A.,** Baton Rouge | 500,000 |
| **Good Hope Industries, Inc.,** Good Hope | 82,100 |
| **Gulf Oil Co., U.S.,** Belle Chasse | 195,900 |
| Venice | 28,700 |
| **Hill Petroleum Co., a Subsidiary of Goldking Refining Co.,** Krotz Springs | 48,000 |
| **International Processors,** St. Rose | 28,600 |
| **LaJet, Inc.,** St. James | 20,000 |
| **Lake Charles Refining Co., (formerly Aweco),** Lake Charles | 28,700 |
| **Mallard Resources, Inc.,** Gueydon | 7,400 |
| **Marathon Oil Co.,** Garyville | 255,000 |
| **Mt. Airy Refining Co.,** Mt. Airy | 25,000 |
| **Murphy Oil Corp.,** Meraux | 92,500 |
| **Placid Refining Co.,** Port Allen | 36,000 |
| **Shell Oil Co.,** Norco | 230,000 |
| **Shepard Oil Co.,** Jennings | 10,000 |
| **Slapco (formerly South Louisiana Production Co.),** Mermentau | 11,000 |
| **Sooner Refining Co.,** Darrow | 5,400 |
| **T & S Refining Inc.,** Jennings | 11,500 |
| **Tenneco Oil Co.,** Chalmette | 115,000 |

| Company | b/d |
|---|---|
| **Texaco Inc.**, Convent | 140,000 |
| **Total** | **2,362,100** |
| **Maryland** | |
| **Amoco Oil Co.**, Baltimore | 15,000 |
| **Chevron U.S.A.**, Baltimore | 14,200 |
| **Total** | **29,200** |
| **Michigan** | |
| **Crystal Refining Co.**, Carson City | 3,000 |
| **Dow Chemical U.S.A.**, Bay City | *20,000 |
| **Lakeside Refining Co., Kalamazoo** | 5,600 |
| **Marathon Oil Co.**, Detroit | 68,500 |
| **Texas American Petrochemicals, Inc.**, West Branch | 11,500 |
| **Total Petroleum, Inc.**, Alma | 40,000 |
| **Total** | **128,600** |
| **Minnesota** | |
| **Ashland Oil, Inc.**, St. Paul Park | 67,143 |
| **Conoco**, Wrenshall | 23,500 |
| **Koch Refining Co.**, Rosemount | 127,300 |
| **Total** | **217,943** |
| **Mississippi** | |
| **Amerada Hess Corp.**, Purvis | 30,000 |
| **Chevron U.S.A.**, Pascagoula | 280,000 |
| **Ergon Refining, Inc.**, Vicksburg | 20,600 |
| **Natchez Refining Co.**, Natchez | 7,600 |
| **Southland Oil Co.**, Lumberton | 5,800 |
| Sandersville | 11,000 |
| Yazoo City | 5,500 |
| **Vicksburg Refining, Inc.**, Vicksburg | 7,900 |
| **Total** | **367,800** |
| **Missouri** | |
| **Amoco Oil Co.**, Sugar Creek | 104,000 |
| **Total** | **104,000** |
| **Montana** | |
| **Conoco**, Billings | 52,500 |
| **Exxon Co. U.S.A.**, Billings | 45,000 |
| **Farmers Union Central Exchange**, Laurel | 33,650 |
| | *8,000 |
| **Flying J (formerly Westco Refining Co.)** Cut Bank | 5,600 |
| **Kenco Refining, Inc.**, Wolf Point | 4,700 |
| **Phillips Petroleum Co.**, Great Falls | 6,000 |
| **Total** | **147,450** |
| **Nebraska** | |
| **CRA, Inc.**, Scottsbluff | 5,600 |
| **Total** | **5,600** |
| **Nevada** | |
| **Nevada Refining Co.**, Tonopah | 4,500 |
| **Total** | **4,500** |
| **New Hampshire** | |
| **ATC Petroleum, Inc.**, Newington | 13,400 |
| **Total** | **13,400** |
| **New Jersey** | |
| **Amerada Hess Corp.**, Port Reading | *68,000 |
| **Chevron U.S.A.**, Perth Amboy | 168,000 |
| **Exxon Co. U.S.A.**, Linden | 270,000 |
| **Mobil Oil Corp.**, Paulsboro | 99,700 |
| | *6,900 |
| **Seaview Petroleum Co.**, Paulsboro | 44,400 |
| **Texaco Inc.**, Westville | 90,000 |
| **Total** | **572,100** |
| **New Mexico** | |
| **Caribou-Four Corners Oil Co.**, Farmington | 2,500 |
| **Giant Industries, Inc.**, Farmington | 13,500 |
| **Navajo Refining Co.**, Artesia | 29,930 |
| **Plateau, Inc.**, Bloomfield | 16,800 |
| **Shell Oil Co.**, Gallup | 18,000 |
| **Southern Union Refining Co.**, Lovington | 36,100 |
| Monument | 0 |
| | *5,400 |
| **Thriftway Oil Co.**, Bloomfield | 6,100 |
| **Total** | **122,930** |
| **New York** | |
| **Ashland Oil, Inc.**, Buffalo | 64,000 |
| **Cibro Petroleum Products, Inc.**, Albany | 33,900 |
| **Mobil Oil Corp.**, Buffalo | 43,000 |
| **Total** | **140,900** |
| **North Carolina** | |
| **ATC Petroleum, Inc.**, Wilmington | 11,900 |
| **Total** | **11,900** |
| **North Dakota** | |
| **Amoco Oil Co.**, Mandan | 56,000 |
| **Flying J (formerly Westland Oil Co.)**, Williston | 4,658 |
| **Northland Oil & Refining Co.**, Dickinson | 5,000 |
| **Total** | **65,658** |
| **Ohio East** | |
| **Ashland Oil, Inc.**, Canton | 66,000 |
| **Total** | **66,000** |
| **Ohio West** | |
| **Ashland Oil, Inc.**, Findlay | 20,400 |
| **Gulf Oil Co. U.S.**, Cleves | 43,700 |
| Toledo | 50,300 |
| **Standard Oil Co. of Ohio**, Lima | 168,000 |
| Toledo | 120,000 |
| **Sun Co.**, Toledo | 125,000 |
| **Total** | **527,400** |
| **Oklahoma** | |
| **Allied Materials Corp.**, Stroud | 7,600 |
| **Basin Refining Inc. (formerly OKC Corp.)**, Okmulgee | 24,000 |
| **Champlin Petroleum Co.**, Enid | 53,800 |
| **Conoco**, Ponca City | 134,000 |
| **Hudson Refining Co., Inc.**, Cushing | 19,500 |
| **Kerr-McGee Corp.**, Wynnewood | 48,630 |
| **Oklahoma Refining Co.**, Cyril | 14,880 |
| **Sun Co.**, Tulsa | 88,500 |
| **Texaco Inc.**, Tulsa | 50,000 |
| **Tonkawa Refining Co.**, Arnett | 10,000 |
| **Tosco Corp. (formerly Sun Co.)** Duncan | 47,500 |
| **Total Petroleum, Inc. (formerly Vickers Petroleum Corp.)**, Ardmore | 64,100 |
| **Total** | **562,510** |
| **Oregon** | |
| **Chevron U.S.A.**, Portland | 15,000 |
| **Total** | **15,000** |
| **Pennsylvania East** | |
| **Atlantic Richfield Co.**, Philadelphia | 125,000 |
| | *60,000 |
| **BP Oil Corp.**, Marcus Hook | 164,000 |
| **Gulf Oil Co. U.S.**, Philadelphia | 206,300 |
| **Sun Co.**, Marcus Hook | 165,000 |
| **Total** | **560,300** |
| **Pennsylvania West** | |
| **Ashland Oil, Inc.**, Freedom | 6,800 |
| **Pennzoil Co.**, Rouseville | 14,600 |
| **Quaker State Oil Refining Corp.** Emlenton | 0 |
| | *3,300 |
| Smethport | 6,700 |
| **United Refining Co.**, Warren | 42,000 |
| **Witco Chemical Corp.**, Bradford | 6,800 |
| **Total** | **76,900** |
| **Tennessee** | |
| **Delta Refining Co.**, Memphis | 49,000 |
| **Total** | **49,000** |
| **Texas Inland** | |
| **Adobe Refining Co., a Div. of First Funding Systems Refining Corp.**, La Blanca | 4,500 |
| **American Petrofina Co. of Texas**, Big Spring | 60,000 |
| **Chevron U.S.A.**, El Paso | 76,000 |
| **Clinton Manges (formerly Sector Refining Co.)**, Palestine | 4,000 |
| | *6,000 |
| **Diamond Shamrock Corp.**, Sunray | 71,100 |
| **Dorchester Refining Co.**, Mount Pleasant | 26,500 |
| White Deer | 0 |
| **Eagle Refining Corp.**, Jacksboro | 1,800 |
| **Flint Chemical Co.**, San Antonio | 1,800 |
| **Howell Hydrocarbons, Inc.**, San Antonio | 9,900 |
| **La Gloria Oil & Gas Co.**, Tyler | 56,000 |
| | *11,000 |
| **Longview Refining Co., a Subsidiary of Crystal Oil Co.**, Longview | 14,000 |
| **Liquid Energy Corp.**, Bridgeport | 10,000 |
| **Petrolite Corp.**, Kilgore | 1,000 |
| **Phillips Petroleum Co.**, Borger | 97,000 |
| **Pioneer Refining Ltd.**, Nixon | 10,700 |
| **Pride Refining, Inc.**, Abilene | 33,000 |
| **Quitman Refining Co.**, Quitman | 6,600 |
| **Rancho Refining Co.**, Donna | 3,500 |
| **Shell Oil Co.**, Odessa | 32,000 |
| **Sigmor Refining Corp.**, Three Rivers | 32,000 |
| **TARCO (formerly Texas Asphalt & Refining Co.)**, Euless | 5,000 |
| **Tesoro Petroleum Corp.**, Carrizo Springs | 26,100 |
| **Texaco Inc.**, Amarillo | 20,000 |
| El Paso | 17,000 |
| **Thriftway Oil Co.**, Graham | 2,400 |
| **Wickett Refining Co.**, Wickett | *8,000 |
| **Winston Refining Co.**, Fort Worth | 20,000 |
| **Total** | **643,000** |
| **Texas Gulf** | |
| **American Petrofina Co. of Texas**, Port Arthur | 90,000 |
| **Amoco Oil Co.**, Texas City | 415,000 |
| **Atlantic Richfield Co.**, Houston | 345,000 |
| **Bronco Refining Co.**, Houston | 2,500 |
| **Carbonit Refinery, Inc.**, Hearne | 10,000 |
| **Champlin Petroleum Co.**, Corpus Christi | 170,000 |
| **Charter International Oil Co.**, Houston | 65,000 |
| **Coastal States Petroleum Co.**, Corpus Christi | 165,000 |
| | *15,000 |
| **Copano Refining Co.**, Ingleside | 11,000 |
| **Crown Central Petroleum Corp.**, Pasadena | 100,000 |
| **Eddy Refining Co.**, Houston | 3,250 |
| **Erickson Refining Corp.**, Houston | 30,000 |
| **Exxon Co. U.S.A.**, Baytown | 640,000 |
| **Friendswood Refining Co.**, Friendswood | 12,500 |
| **Gulf Energy Refining Corp.**, Brownsville | 10,000 |
| **Gulf Oil Co. U.S.A.**, Port Arthur | 335,800 |
| **Gulf States Oil & Refining Co.**, Corpus Christi | 38,000 |
| **Independent Refining Corp.**, Winnie | 50,000 |
| **Marathon Oil Co.**, Texas City | 69,500 |
| **Mobil Oil Corp.**, Beaumont | 268,000 |
| | *57,600 |
| **Monsanto Co.**, Alvin/Texas City | 12,000 |
| **Nueces Petrochemical Co., (formerly Quintana-Howell Joint Venture)**, Corpus Christi | 30,000 |
| **Petraco-Valley Oil & Refining Co.**, Brownsville | 12,300 |
| **Phillips Petroleum Co.**, Sweeny | 190,000 |
| | *28,000 |
| **Placid Refining Co.**, Mont Belvieu | 12,400 |
| **Saber Refining Co.**, Corpus Christi | 21,000 |
| **Sentry Refining, Inc.**, Corpus Christi | 30,000 |
| **Shell Oil Co.**, Deer Park | 285,000 |
| **South Hampton Co.**, Silsbee | 20,500 |
| **Southwestern Refining Co.**, Corpus Christi | 120,000 |
| **Sun Co.**, Corpus Christi | 57,000 |
| **Texaco Inc.**, Port Arthur | 365,000 |
| Port Neches | 47,000 |
| **Texas City Refining, Inc.**, Texas City | 126,700 |

| Company | b/d |
|---|---|
| **Texas Standard Refining Co.**, Houston | 2,000 |
| **Tipperary Refining Co.**, Ingleside | 10,400 |
| **Uni Oil Co.**, Ingleside | 39,400 |
| **Union Oil Co. of California**, Nederland | 120,000 |
| **Val Verde International**, Brownsville | 1,000 |
| **Total** | **4,522,350** |
| **Utah** | |
| **Amoco Oil Co.**, Salt Lake City | 39,000 |
| **Caribou-Four Corners Oil Co.**, Woods Cross | 7,500 |
| **Chevron U.S.A.**, Salt Lake City | 45,000 |
| **Husky Oil Co.**, North Salt Lake | 25,000 |
| **Morrison Petroleum Co.**, Woods Cross | 6,500 |
| **Phillips Petroleum Co.**, Woods Cross | 24,000 |
| **Plateau, Inc.**, Roosevelt | 7,500 |
| **Western Refining Co.**, Woods Cross | 12,500 |
| **Total** | **167,000** |
| **Virginia** | |
| **Amoco Oil Co.**, Yorktown | 53,000 |
| **Total** | **53,000** |
| **Washington** | |
| **Atlantic Richfield Co.**, Ferndale | 115,000 |
| **Chevron U.S.A.**, Richmond Beach | 5,500 |
| **Mobil Oil Corp.**, Ferndale | 71,500 |
| **Shell Oil Co.**, Anacortes | 91,000 |
| **Sound Refining Inc.**, Tacoma | 11,900 |
| **Texaco Inc.**, Anacortes | 78,000 |
| **U.S. Oil & Refining Co.**, Tacoma | 21,400 |
| **United Independent Oil Co.**, Tacoma | *730 |
| **Total** | **384,900** |
| **West Virginia** | |
| **Elk Refining Co., a Div. of Pennzoil Co.**, Falling Rock | 5,600 |
| **Quaker State Oil Refining Corp.**, Newell | 11,000 |
| St. Mary's | 5,000 |
| **Total** | **22,300** |
| **Wisconsin** | |
| **Murphy Oil Corp.**, Superior | 40,000 |
| **Total** | **40,000** |
| **Wyoming** | |
| **Amoco Oil Co.**, Casper | 48,000 |
| **C & H Refinery, Inc.**, Lusk | 190 |
| **Glacier Park Co.**, Osage | 10,000 |
| **Glenrock Refinery, Inc.**, Glenrock | 6,000 |
| **Husky Oil Co.**, Cheyenne | 23,600 |
| Cody | 11,500 |
| **Little America Refining Co.**, Casper | 24,500 |
| Sinclair (formerly Sinclair Oil Corp.) | 72,000 |
| **Mountaineer Refining Co. Inc.**, La Barge | 700 |
| **Sage Creek Refining Co., Inc.**, Cowley | 600 |
| **Silver Eagle Refining Co.**, La Barge | 1,950 |
| **Southwestern Refining Co.**, La Barge | 1,040 |
| **Texaco Inc.**, Casper | 21,000 |
| **Wyoming Refining Co., a subsidiary of Hermes Products**, Newcastle | 10,500 |
| **Total** | **231,580** |
| **Hawaiian Foreign Trade Zone** | |
| **Hawaiian Independent Refinery, Inc.**, (b) Ewa Beach | 67,900 |
| **Total** | **67,900** |
| **Puerto Rico** | |
| **Commonwealth Oil Refining Co.**, Penuelas | 95,000<br>*48,500 |
| **Gulf Oil Corp.**, Bayamon | 37,000 |
| **Peerless Petrochemicals Inc.**, Ponce | 10,000 |
| **Phillips Puerto Rico Core, Inc.**, (b) Guayama | — |
| **Sun Co.**, Yabucoa | 86,000 |
| **Total** | **228,000** |
| **Virgin Islands** | |
| **Amerada Hess Corp.**, St. Croix | 670,000 |
| **Total** | **670,000** |
| **Guam** | |
| **Guam Oil & Refining Corp.**, Agana | 43,900 |
| **Total** | **43,900** |

*Capacity shut down but capable of being placed in operation within 90 days; (a) Although these refineries are normally shut down on Jan. 1, they are operated at or near capacity during the asphalt paving season; (b) Not included with refineries in the U.S. because they are located in foreign trade zones.

Source: Department of Energy, Energy Information Administration, Petroleum Refineries, Annual, May 22, 1981.

# Lubricating Oil and Wax Capacities of U.S. Refineries

## (All capacities in b/d as of Jan. 1, 1981)

| | | | Finished Lube Capacity | | | | | Wax Capacity | |
|---|---|---|---|---|---|---|---|---|---|
| **Company** | **Location** | **Crude Capacity** | **C** | **D** | **E** | **F** | **Total** | **G** | **H** |
| Allied Material Corp. | Stroud, Okla. | 7.6 | 1.0 | | | | 1.0 | | 0.2 |
| Amoco Oil Co. | Casper, Wyo. | 48.0 | 1.3 | | 0.1 | | 1.4 | 0.2 | 0.3 |
| Amoco Oil Co. | Whiting, Ind. | 380.0 | 6.2 | | | | 6.2 | 0.6 | |
| Ashland Oil, Inc. | Catlettsburg, Ky. | 220.0 | 5.0 | | | | 5.0 | | 1.8 |
| Ashland Oil, Inc. | Freedom, Pa. | 6.5 | | | 1.3 | | 1.3 | | 0.4 |
| Atlantic Richfield Co. | Houston, Tex. | 345.0 | 4.4 | | | 2.0 | 6.4 | 0.4 | 0.4 |
| Bayou State Oil Corp. | Hosston, La. | 3.0 | | | | | | | |
| Calumet Refining Co. | Burnham, Ill. | 0.6 | | | | 0.6 | 0.6 | | |
| Calumet Refining Co. | Princeton, La. | 4.4 | | | | 3.2 | 3.2 | | |
| Chevron U.S.A., Inc. | Richmond, Calif. | 365.0 | 4.0 | 2.3 | | | 6.3 | 1.2 | 1.0 |
| Cit-Con Oil Corp. | Lake Charles, La. | | 10.0 | | | | 10.0 | 1.0 | 0.8 |
| Continental Oil Co. | Ponca City, Okla. | 134.0 | 2.0 | | | | 2.0 | 0.2 | |
| CRA, Inc. | Coffeyville, Kans. | 56.5 | 2.5 | | | | 2.5 | 0.2 | |
| Cross Oil & Refining, Inc. | Smackover, Ark. | 9.8 | | | | 2.0 | 2.0 | | |
| Exxon Co., U.S.A. | Baton Rouge, La. | 500.0 | 13.5 | | 2.0 | | 15.5 | 1.5 | |
| Exxon Co., U.S.A. | Baytown, Tex. | 640.0 | 16.1 | 8.7 | | 6.7 | 31.5 | | 1.7 |
| Gulf Oil Co.—U.S. | Port Arthur, Tex. | 333.4 | 6.2 | 1.4 | 3.3 | 2.1 | 13.0 | 0.3 | 0.4 |
| Lubrication Co. of America | Saugus, Calif. | | | 0.5 | | | 0.5 | | |
| Macmillan Petroleum Inc. | Norphlet, Ark. | 4.4 | | | | 2.2 | 2.2 | | |
| Mobil Oil Corp. | Beaumont, Tex. | 325.0 | 9.1 | | | | 9.1 | 1.4 | 0.3 |
| Mobil Oil Corp. | Paulsboro, N.J. | 106.6 | 7.7 | | | | 7.7 | 0.0 | 0.3 |
| Pennzoil Co. | Falling Rock, W.Va. | 5.6 | | | 1.4 | | 1.4 | 0.1 | 0.2 |
| Pennzoil Co. | Rouseville, Pa. | 14.6 | | | 3.4 | | 3.4 | 0.4 | 0.3 |
| Pennzoil Co., Atlas Processing Co. | Shreveport, La. | 45.0 | | | | 2.2 | 2.2 | | |
| Petrolite Corp. | Barnsdall, Okla. | | | | | | | 0.4 | |
| Petrolite Corp., Bareco Div. | Kilgore, Tex. | 1.0 | | | | | | 0.3 | |
| Phillips Petroleum Co. | Kansas City, Kans. | 80.0 | 2.5 | | | | 2.5 | | 0.4 |
| Quaker State Oil Ref. Corp. | Emlenton, Pa. | | | | | | | 0.7 | |
| Quaker State Oil Ref. Corp. | Farmers Valley, Pa. | 6.5 | 2.5 | | | | 2.5 | 0.4 | 0.5 |
| Quaker State Oil Ref. Corp. | Newell, W.Va. | 11.7 | | | 3.6 | | 3.6 | | 0.8 |
| Quaker State Oil Ref. Corp. | St. Mary's, W.Va. | 4.9 | 1.6 | | | | 1.6 | | 0.3 |
| Shell Oil Co. | Deer Park, Tex. | 285.0 | 4.5 | | | 3.0 | 7.5 | 1.2 | |
| Shell Oil Co. | Martinez, Calif. | 104.0 | | 3.5 | | 0.3 | 3.8 | | |
| Shell Oil Co. | Wood River, Ill. | 283.0 | 5.2 | | | | 5.2 | | 0.7 |
| Sigmor Refining Co. | Three Rivers, Tex. | 2.0 | | | | 1.0 | 1.0 | | |
| Standard Oil Co. (Ohio) | Lima, Ohio | 168.0 | 2.0 | | 0.4 | | 2.4 | | |
| Sun Co., Inc. | Marcus Hook, Pa. | 165.0 | 5.5 | | | 10.5 | 16.0 | 1.0 | |
| Sun Co., Inc. | Tulsa, Okla. | 88.5 | 7.8 | | | | 7.8 | 0.9 | |
| Sun Co., Inc. | Yabucoa, Puerto Rico | 85.0 | 6.5 | | | | 6.5 | | 1.7 |
| Texaco U.S.A. | Port Arthur, Tex. | 365.0 | 12.0 | 0.6 | 3.4 | 4.0 | 20.0 | 0.1 | 1.8 |
| Union Oil Co. of California | Nederland, Tex. | 120.0 | 2.7 | | | | 2.7 | 0.0 | 0.1 |
| Union Oil Co. of California | Rodeo, Calif. | 70.0 | 4.0 | | | | 4.0 | 0.6 | 1.5 |
| Witco Chemical Corp. | Bradford, Pa. | 7.5 | 1.1 | | 0.7 | | 1.8 | 0.5 | |
| Witco Chemical Corp. | Oildale, Calif. | 11.0 | | 2.5 | 1.8 | | 4.3 | | |
| | TOTAL: | 5413.1 | 146.9 | 19.5 | 21.4 | 39.8 | 227.6 | 13.6 | 15.9 |

### Canadian Refineries

| Company | Location | Crude Capacity | C | D | E | F | Total | G | H |
|---|---|---|---|---|---|---|---|---|---|
| Gulf Canada Limited | Clarkson, Ontario | 79.1 | 4.5 | | | | 4.5 | | 1.0 |
| Imperial Oil Enterprises Ltd. | Sarnia, Ontario | 126.1 | 5.3 | 0.7 | | | 6.0 | 0.3 | 1.6 |
| Imperial Oil Enterprises Ltd. | Strathcona, Alberta | 150.7 | 2.9 | | | | 2.9 | | 1.1 |
| International Waxes, Ltd. | Agincourt, Ontario | | | | | | | 0.8 | |
| Shell Canada Limited | Montreal East, Quebec | 31.0 | 3.4 | | | | 3.4 | | 1.0 |
| | TOTAL: | 386.9 | 16.1 | 0.7 | 0.0 | 0.0 | 16.8 | 1.1 | 4.7 |

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Definitions: C—Solvent extracted paraffinic stocks; D—Solvent extracted naphthenic stocks; E—Unextracted paraffinic stocks; F—Unextracted naphthenic stocks; G—Fully refined, crude scale, and micro waxes; H—Semi-finished, slack waxes and petrolatums.

Source: National Petroleum Refiners Assn., Lubricating Oil and Wax Capacities, 1981.

# U.S. Refineries and Capacities by Companies

## (In Descending Order as of Jan. 1, 1981)

*Companies controlling more than 100,000 b/d of crude oil capacity:*
**No. of companies: 31; No. of refineries: 137; Total capacity: 15,418,712 b/d.**

| Company | b/d |
|---|---|
| **Exxon Corp.** | |
| **Exxon Co. U.S.A.** | |
| Baytown, TX | 640,000 |
| Baton Rouge, LA | 500,000 |
| Linden, NJ | 290,000 |
| Benicia, CA | 102,000 |
| Billings, MT | 45,000 |
| Total | 1,577,000 |
| **Standard Oil Co. of California** | |
| **Chevron U.S.A.** | |
| El Segundo, CA | 405,000 |
| Richmond, CA | 365,000 |
| Pascagoula, MS | 280,000 |
| Perth Amboy, NJ | 168,000 |
| El Paso, TX | 76,000 |
| Honolulu, HI | 46,000 |
| Salt Lake, UT | 45,000 |
| Bakersfield, CA | 26,000 |
| Kenai, AK | 22,000 |
| Willbridge, OR | 15,000 |
| Baltimore, MD | 14,200 |
| Richmond Beach, WA | 5,500 |
| Total | 1,469,700 |
| **Standard Oil Co. of Indiana** | |
| **Amoco Oil Co.** | |
| Texas City, TX | 415,000 |
| Whiting, IN | 380,000 |
| Wood River, IL | 108,000 |
| Sugar Creek, MO | 104,000 |
| Mandan, ND | 56,000 |
| Yorktown, VA | 53,000 |
| Casper, WY | 48,000 |
| Salt Lake City, UT | 39,000 |
| Savannah, GA | 24,000 |
| Baltimore, MD | 15,000 |
| Total | 1,238,000 |
| **Shell Oil Co.** | |
| Deer Park, TX | 285,000 |
| Wood River, IL | 283,000 |
| Norco, LA | 230,000 |
| Martinez, CA | 104,000 |
| Wilmington, CA | 93,000 |
| Anacortes, WA | 91,000 |
| Odessa, TX | 32,000 |
| Gallup, NM | 18,000 |
| Total | 1,136,000 |
| **Texaco Inc.** | |
| Port Arthur, TX | 365,000 |
| Convent, LA | 140,000 |
| Westville, NJ | 90,000 |
| Lawrenceville, IL | 84,000 |
| Anacortes, WA | 78,000 |
| Wilmington, CA | 75,000 |
| Lockport, IL | 72,000 |
| West Tulsa, OK | 50,000 |
| Port Neches, TX | 47,000 |
| Casper, WY | 21,000 |
| Amarillo, TX | 20,000 |
| El Paso, TX | 17,000 |
| Total | 1,059,000 |
| **Gulf Oil Corp.** | |
| **Gulf Oil Co. U.S.** | |
| Port Arthur, TX | 335,800 |
| Philadelphia, PA | 206,300 |
| Belle Chasse, LA | 195,900 |
| Santa Fe Springs, CA | 51,500 |
| Toledo, OH | 50,300 |
| Cleves, OH | 43,700 |
| Venice, LA | 28,700 |
| Total | 912,200 |
| **Mobil Oil Corp.** | |
| Beaumont, TX | 325,000 |
| Joliet, IL | 180,000 |
| Torrance, CA | 123,500 |
| Paulsboro, NJ | 106,600 |
| Ferndale, WA | 71,500 |
| Augusta, KS | 50,000 |
| Buffalo, NY | 43,000 |
| Total | 899,600 |
| **Atlantic Richfield Co.** | |
| Houston, TX | 345,000 |
| Carson, CA | 212,000 |
| Philadelphia, PA | 185,000 |
| Ferndale, WA | 115,000 |
| North Slope, AK | 14,200 |
| Total | 871,200 |
| **Marathon Oil Co.** | |
| Garyville, LA | 255,000 |
| Robinson, IL | 195,000 |
| Texas City, TX | 69,500 |
| Detroit, MI | 68,500 |
| Total | 588,000 |
| **Union Oil Co. of California** | |
| Lemont, IL | 151,000 |
| Nederland, TX | 120,000 |
| Wilmington, CA | 108,000 |
| Rodeo, CA | 70,000 |
| Arroyo Grande, CA | 41,000 |
| Total | 490,000 |
| **Ashland Oil, Inc.** | |
| Catlettsburg, KY | 213,400 |
| St. Paul Park, MN | 67,143 |
| Canton, OH | 66,000 |
| Buffalo, NY | 64,000 |
| Louisville, KY | 25,200 |
| Findlay, OH | 20,400 |
| Freedom, PA | 6,800 |
| Total | 462,943 |
| **Standard Oil Co. of Ohio** | |
| **Standard Oil Co. of Ohio** | |
| Lima, OH | 168,000 |
| Toledo, OH | 120,000 |
| **BP Oil Corp.** | |
| Marcus Hook, PA | 164,000 |
| Total | 452,000 |
| **Conoco** | |
| West Lake, LA | 156,500 |
| Ponca City, OK | 134,000 |
| Billings, MT | 52,500 |
| Paramount, CA | 46,500 |
| Wrenshall, MN | 23,500 |
| Egan, LA | 15,500 |
| Denver, CO | 10,100 |
| Santa Maria, CA | 9,500 |
| Total | 448,100 |
| **Sun Co., Inc.** | |
| Marcus Hook, PA | 165,000 |
| Toledo, OH | 125,000 |
| Tulsa, OK | 88,500 |
| Corpus Christi, TX | 57,000 |
| Total | 435,500 |
| **Phillips Petroleum Co.** | |
| Sweeny, TX | 218,000 |
| Borger, TX | 97,000 |
| Kansas City, KS | 80,000 |
| Woods Cross, UT | 24,000 |
| Great Falls, MT | 6,000 |
| Total | 425,000 |
| **Coastal Corp.** | |
| **Coastal States Petroleum Co.** | |
| Corpus Christi, TX | 185,000 |
| **Pacific Refining, Inc.** | |
| Hercules, CA | 85,000 |
| **Derby Refining Co.** | |
| North Wichita, KS | 27,982 |
| Total | 297,982 |
| **Cities Service Co.** | |
| Lake Charles, LA | 291,000 |
| **Union Pacific Corp.** | |
| **Champlin Petroleum Co.** | |
| Corpus Christi, TX | 170,000 |
| Wilmington, CA | 60,000 |
| Enid, OK | 53,800 |
| Total | 283,800 |
| **Getty Oil Co.** | |
| **Getty Refining & Marketing Co.** | |
| Delaware City, DE | 140,000 |
| El Dorado, KS | 80,577 |
| Bakersfield, CA | 63,000 |
| Total | 283,577 |
| **Tosco Corp.** | |
| Avon, CA | 137,000 |
| Duncan, OK | 47,500 |
| El Dorado, AR | 47,000 |
| Bakersfield, CA | 40,000 |
| Total | 271,500 |
| **Dow Chemical Co.** | |
| **Dow Chemical U.S.A.** | |
| Oyster Creek, TX | 190,000 |
| Bay City, MI | 20,000 |
| Total | 210,000 |
| **Kerr-McGee Corp.** | |
| **Kerr-McGee Corp.** | |
| Wynnewood, OK | 48,630 |
| Dubach, LA | 10,780 |
| **Southwestern Refining Co.** | |
| Corpus Christi, TX | 120,000 |
| **Cotton Valley Solvents Co.** | |
| Cotton Valley, LA | 8,000 |
| Total | 187,410 |
| **American Petrofina Co. of Texas** | |
| Port Arthur, TX | 90,000 |
| Big Spring, TX | 60,000 |
| Total | 150,000 |
| **Total Petroleum, Inc.** | |
| Ardmore, OK | 64,100 |
| Arkansas City, KS | 42,500 |
| Alma, MI | 40,000 |
| Total | 146,600 |
| **Murphy Oil Corp.** | |
| Meraux, LA | 92,500 |
| Superior, WI | 40,000 |
| Total | 132,500 |
| **Clark Oil & Refining Corp.** | |
| Blue Island, IL | 66,500 |
| Hartford, IL | 63,600 |
| Total | 130,100 |
| **Koch Industries, Inc.** | |
| **Koch Refining Co.** | |
| Rosemount, MN | 127,300 |
| **Agway Petroleum Corp.** | |
| **Texas City Refining, Inc.** | |
| Texas City, TX | 126,700 |
| **Energy Cooperative, Inc.** | |
| East Chicago, IN | 126,000 |
| **Tenneco Oil Co.** | |
| Chalmette, LA | 114,000 |
| **Crown Central Petroleum Corp.** | |
| Pasadena, TX | 100,000 |

*Companies controlling 30,000 b/d to 99,999 b/d of crude oil capacity:*

**No. of companies: 32: No. of refineries: 45: Total capacity: 1,839,570 b/d.**

| Company | b/d |
|---|---|
| **Amerada Hess Corp.** | |
| Port Reading, NJ | **68,000 |
| Purvis, MS | 30,000 |
| **Little America Refining Co.** | |
| Casper, WY | 24,500 |
| Sinclair, WY | 72,000 |
| **Farmland Industries, Inc.** | |
| **CRA, Inc.** | |
| Coffeyville, KS | 56,500 |
| Phillipsburg, KS | 26,400 |
| Scottsbluff, NE | 5,600 |
| **Earth Resources Co.** | |
| **Delta Refining Co.** | |
| Memphis, TN | 49,000 |
| **Earth Resources Co. of Alaska** | |
| North Pole, AK | 38,000 |
| **Good Hope Industries, Inc.** | |
| **Good Hope Refinery, Inc.** | |
| Good Hope, LA | 82,100 |
| **Independent Refining Corp.** | |
| Winnie, TX | 50,000 |
| Port Neches, TX | 30,000 |
| **Tesoro Petroleum Corp.** | |
| **Tesoro Petroleum Corp.** | |
| Carrizo Springs, TX | 26,100 |
| **Tesoro-Alaskan Petroleum Corp.** | |
| Kenai, AK | 48,500 |
| **Diamond Shamrock Corp.** | |
| Sunray, TX | 71,700 |
| **Texas Eastern Transmission Corp.** | |
| **La Gloria Oil & Gas Co.** | |
| Tyler, TX | 67,000 |
| **Pennzoil Co.** | |
| **Pennzoil Co.** | |
| Rouseville, PA | 14,600 |
| **Atlas Processing Co.** | |
| Shreveport, LA | 45,000 |
| **Elk Refining Co.** | |
| Falling Rock, WV | 5,600 |
| **Charter Oil Co.** | |
| **Charter International Oil Co.** | |
| Houston, TX | 65,000 |
| **Husky Oil Co.** | |
| North Salt Lake, UT | 25,000 |
| Cheyenne, WY | 23,600 |
| Cody, WY | 11,500 |
| **National Cooperative Refinery Assn.** | |
| McPherson, KS | 57,000 |
| **Placid Refining Co.** | |
| Port Allen, LA | 36,000 |
| Mont Belvieu, TX | 12,400 |
| **Goldking Refining, Ltd.** | |
| **Hill Petroleum Co.** | |
| Krotz Springs, LA | 48,000 |
| **Seaview Petroleum Co.** | |
| Paulsboro, NJ | 44,400 |
| **Powerine Oil Co.** | |
| Santa Fe Springs, CA | 44,120 |
| **Rock Island Refining Corp.** | |
| Indianapolis, IN | 43,200 |
| **United Refining Co.** | |
| Warren, PA | 42,000 |
| **Farmers Union Central Exchange** | |
| Laurel, MT | 41,650 |
| **Penn Central Corp.** | |
| **Edgington Oil Co.** | |
| Long Beach, CA | 41,600 |
| **Southern Union Co.** | |
| **Southern Union Refining Co.** | |
| Lovington, NM | 36,100 |
| Monument, NM | 5,400 |
| **Louisiana Land & Exploration Co.** | |
| Mobile, AL | 41,300 |
| **Uni International, Inc.** | |
| **Uni Refining, Inc.** | |
| Ingleside, TX | 39,400 |
| **Gulf States Oil & Refining Co.** | |
| Corpus Christi, TX | 38,000 |
| **Hunt Oil Co.** | |
| Tuscaloosa, AL | 35,000 |
| **Cirillo Brothers Oil Co.** | |
| **Cibro Petroleum Products Inc.** | |
| Albany, NY | 33,900 |
| **Pride Refining, Inc.** | |
| Abilene, TX | 33,000 |
| **Sigmor Corp.** | |
| **Sigmor Refining Co.** | |
| Three Rivers, TX | 32,000 |
| **Howell Corp./Quintana Refining Co.** | |
| **Nueces Petrochemical Co.** | |
| Corpus Christi, TX | 30,000 |
| **Sentry Refining, Inc.** | |
| Corpus Christi, TX | 30,000 |

*Companies controlling from 10,000 b/d to 29,999 b/d of crude oil capacity:*

**No. of companies: 71; No. of refineries: 85; Total capacity: 1,270,388 b/d.**

| Company | b/d |
|---|---|
| **Holly Corp.** | |
| **Navajo Refining Co.** | |
| Artesia, NM | 29,930 |
| **Fletcher Oil & Refining Co.** | |
| Carson, CA | 29,500 |
| **E-Z Serv Refining, Inc.** | |
| Shallow Water, Kansas | 9,500 |
| **Winston Refining Co.** | |
| Fort Worth, TX | 20,000 |
| **Aweco** | |
| **Lake Charles Refining Co.** | |
| Lake Charles, LA | 28,700 |
| **International Processors** | |
| St. Rose, LA | 28,600 |
| **Manatee Energy Co.** | |
| Port Manatee, FL | 28,400 |
| **Mobile Bay Refining Co.** | |
| Chickasaw, AL | 28,100 |
| **Quaker State Oil Refining Corp.** | |
| Newell, WV | 11,700 |
| Smethport, PA | 6,700 |
| St. Mary's, WV | 5,000 |
| Emlenton, PA | 3,300 |
| **Dorchester Gas Corp.** | |
| **Dorchester Refining Co.** | |
| Mount Pleasant, TX | 26,500 |
| **A Johnson & Co., Inc.** | |
| **ATC Petroleum, Inc.** | |
| Newington, NH | 13,400 |
| Wilmington, NC | 11,900 |
| **Marion Corp.** | |
| Theodore, AL | 25,000 |
| **Boswell Oil Co.** | |
| **Mt. Airy Refining Co.** | |
| Mt. Airy, LA | 25,000 |
| **Suburban Propane Gas Corp.** | |
| **Plateau, Inc.** | |
| Bloomfield, NM | 16,800 |
| Roosevelt, UT | 7,500 |
| **Basin Refining Inc.** | |
| Okmulgee, OK | 24,000 |
| **U.S.A. Petrochem Corp.** | |
| Ventura, CA | 24,000 |
| **Pester Corp.** | |
| **Pester Refining Co.** | |
| El Dorado, KS | 22,550 |
| **Vermont Gas Systems, Inc.** | |
| **Southland Oil Co.** | |
| Sandersville, MS | 11,000 |
| Lumberton, MS | 5,800 |
| Crupp, MS | 5,500 |
| **Kern County Refinery, Inc.** | |
| Bakersfield, CA | 21,400 |
| **Saber Energy, Inc.** | |
| **Saber Refining Co.** | |
| Corpus Christi, TX | 21,000 |
| **West Coast Oil Co.** | |
| Oildale, CA | 21,000 |
| **Indiana Farm Bureau Cooperative Association** | |
| Mount Vernon, IN | 20,600 |
| **Ergon Refining, Inc.** | |
| Vicksburg, MS | 20,600 |
| **Texas Oil & Chemical Co.** | |
| **South Hampton Refining Co.** | |
| Silsbee, TX | 20,500 |
| **North American Petroleum Co.** | |
| **LaJet, Inc.** | |
| St. James, LA | 20,000 |
| **Hudson Oil Co., Inc.** | |
| **Hudson Refining Co., Inc.** | |
| Cushing, OK | 19,500 |
| **McTan Corp.** | |
| **Bruin Refining, Inc.** | |
| St. James, LA | 19,300 |
| **Marlex Petroleum, Inc.** | |
| **Marlex Oil & Refining, Inc.** | |
| Los Angeles, CA | 19,000 |
| **Crystal Oil Co.** | |
| **Longview Refining Co.** | |
| Longview, TX | 14,000 |
| **Berry Petroleum Co.** | |
| Stephens, AR | 4,000 |
| **Tomlinson Refining, Inc.** | |
| **Pioneer Refining, Ltd.** | |
| Nixon, TX | 18,000 |
| **Witco Chemical Corp.** | |
| Oildale, CA | 11,000 |
| Bradford, PA | 6,800 |
| **Newhall Refining Co., Inc.** | |
| Newhall, CA | 17,600 |
| **Beacon Oil Co.** | |
| Hanford, CA | 17,300 |
| **MacMillan Ring-Free Oil Co., Inc.** | |
| Long Beach, CA | 12,200 |
| Norphlet, AR | 4,400 |
| **Ultramar Co., Ltd.** | |
| **Golden Eagle Refining Co., Inc.** | |
| Carson, CA | 16,170 |
| **Calcasieu Refining, Ltd.** | |
| Lake Charles, LA | 16,000 |

| Company | b/d |
|---|---|
| **Gladieux Refinery Inc.** | |
| Fort Wayne, IN | 15,500 |
| **Demenno Resources** | |
| Compton, CA | 15,000 |
| **Mid-Continent Systems, Inc.** | |
| **Natchez Refining Co.** | |
| Natchez, MS | 15,000 |
| **World Oil Co.** | |
| **Sunland Refining Corp.** | |
| Fresno, CA | 15,000 |
| **Oklahoma Refining Co.** | |
| Cyril, OK | 14,880 |
| **Giant Industries Inc.** | |
| Farmington, NM | 13,500 |
| **Gary Energy Co.** | |
| **Gary Refining Co.** | |
| Fruita, CO | 13,100 |
| **Seminole Oil Co.** | |
| **Seminole Refining, Inc.** | |
| St. Marks, FL | 13,000 |
| **Friendswood Refining Co.** | |
| Friendswood, TX | 12,500 |
| **Western Refining Co.** | |
| Woods Cross, VT | 12,500 |
| **Petraco-Valley Oil & Refining Co.** | |
| Brownsville, TX | 12,300 |
| **Thagard Oil Co.** | |
| **Lunday-Thagard Oil Co.** | |
| South Gate, CA | 12,000 |
| **Monsanto Co.** | |
| Texas City, TX | 12,000 |
| **San Joaquin Refining Co.** | |
| Oildale, CA | 12,000 |
| **Time Oil Co.** | |
| **U.S. Oil & Refining Co.** | |
| Tacoma, WA | 12,000 |
| **Vedette Energy, Inc.** | |
| **Gulf Energy Refining Corp.** | |
| Brownsville, TX | 10,000 |
| **Val Verde International** | |
| Brownsville, TX | 2,000 |
| **Kalama Chemical, Inc.** | |
| **Sound Refining, Inc.** | |
| Tacoma, WA | 11,900 |
| **T & S Refining, Inc.** | |
| Jennings, LA | 11,500 |
| **Texas American Oil, Inc.** | |
| **Texas American Petrochemical, Inc.** | |
| West Branch, MI | 11,500 |
| **Copano Refining Co.** | |
| Ingleside, TX | 11,100 |
| **Marley** | |
| **ECO Petroleum, Inc.** | |
| Long Beach, CA | 11,000 |
| **Central Louisiana Energy** | |
| **Slapco** | |
| Mermentau, LA | 11,000 |
| **Hermes Products** | |
| **Wyoming Refining Co.** | |
| Newcastle, WY | 10,500 |
| **Tipperary Corp.** | |
| **Tipperary Refining Co.** | |
| Ingleside, TX | 10,400 |
| **Flying J, Inc.** | |
| Cut Bank, MO | 5,600 |
| Williston, ND | 4,658 |
| **Coastal Petroleum Co.** | |
| Paloma, CA | 10,200 |

| Company | b/d |
|---|---|
| **Sabre Refining, Inc.** | |
| Bakersfield, CA | 10,000 |
| **Sierra Anchor/Sierra Energy Association** | |
| **Anchor Refining Co., Inc.** | |
| McKittrick, CA | 10,000 |
| **Shepard Oil, Inc.** | |
| Jennings, LA | 10,000 |
| **Clinton Manges** | |
| Palestine, TX | 10,000 |
| **Burlington Northern, Inc.** | |
| **Glacier Park Co.** | |
| Osage, WY | 10,000 |
| **Carbonit Refinery, Inc.** | |
| Hearne, TX | 10,000 |
| **Mitchell Energy & Development** | |
| **Liquid Energy Corp.** | |
| Bridgeport, TX | 10,000 |
| **Tonkawa Refining Co.** | |
| Arnett, OK | 10,000 |
| **Coral Petroleum Inc.** | |
| Cordova, AL | 10,000 |
| **Caribou-Four Corners Oil Co.** | |
| Woods Cross, UT | 7,500 |
| Farmington, NM | 2,500 |

*Companies controlling 2,500 b/d to 9,999 b/d of crude oil capacity:*

**No. of companies: 39; No. of refineries 42; Total Capacity: 229,850 b/d.**

| Company | b/d |
|---|---|
| **Howell Corp.** | |
| **Howell Hydrocarbons, Inc.** | |
| San Antonio, TX | 9,900 |
| **Moore & Munger Inc.** | |
| **Cross Oil & Refining Co. of Arkansas** | |
| Smackover, AR | 9,700 |
| **Lakeside Refining Co.** | |
| Kalamazoo, MI | 5,600 |
| **Crystal Refining Co.** | |
| Carson City, MI | 3,000 |
| **Southern Independent Oil & Refining** | |
| **Laketon Asphalt Refining Co.** | |
| Laketon, IN | 8,500 |
| **Thriftway Co.** | |
| Bloomfield, NM | 6,100 |
| Graham, TX | 2,400 |
| **Canal Refining Co.** | |
| Church Point, LA | 8,000 |
| **Adobe Oil & Gas Co.** | |
| **Wickett Refining Co.** | |
| Wickett, TX | 8,000 |
| **Vicksburg Refining, Inc.** | |
| Vicksburg, MS | 7,900 |
| **Allied Materials Corp.** | |
| Stroud, OK | 7,600 |
| **Industrial Fuel & Asphalt Co.** | |
| **Industrial Fuel & Asphalt of Indiana** | |
| Hammond, IN | 7,600 |
| **Mallard Resources** | |
| Gueydan, LA | 7,400 |
| **Quad Refining Corp.** | |
| Bakersfield, CA | 7,000 |
| **Quitman Refining Co.** | |
| Quitman, TX | 6,600 |
| **Claiborne Gasoline Co.** | |
| Lisbon, LA | 6,500 |
| **Morrison Petroleum Co.** | |
| Woods Cross, UT | 6,500 |

| Company | b/d |
|---|---|
| **Arizona Fuels Corp.** | |
| Fredonia, AZ | 6,000 |
| **Road Oil Sales, Inc.** | |
| Bakersfield, CA | 6,000 |
| **Glenrock Refinery, Inc.** | |
| Glenrock, WY | 6,000 |
| **Huntway Refining Co.** | |
| Wilmington, CA | 5,500 |
| **Sooner Refining Co.** | |
| Darrow, LA | 5,400 |
| **Bayou State Oil Corp.** | |
| Hosston, LA | 5,000 |
| **Evangeline Refining Co., Inc.** | |
| Jennings, LA | 5,000 |
| **Indiana Refining, Inc.** | |
| Princeton, IN | 5,000 |
| **Northland Oil & Refining Co.** | |
| Dickinson, ND | 5,000 |
| **Somerset Refinery, Inc.** | |
| Somerset, KY | 5,000 |
| **Texas Armada Refining Co.** | |
| **TARCO** | |
| Euless, TX | 5,000 |
| **Warrior Asphalt Co. of Alabama** | |
| Holt, AL | 5,000 |
| **Young Refining Corp.** | |
| Douglasville, GA | 5,000 |
| **Kenco Refining, Inc.** | |
| Wolf Point, MO | 4,700 |
| **Gibson Oil & Refining Co., Inc.** | |
| Bakersfield, CA | 4,600 |
| **Nevada Refining Co.** | |
| Tonopah, NV | 4,500 |
| **Funding Systems Refining Corp.** | |
| **Adobe Refining Co.** | |
| La Blanca, TX | 4,500 |
| **Kentucky Oil & Refining Co.** | |
| Betsy Lane, KY | 3,000 |
| Troy, IN | 1,500 |
| **Oxnard Refinery** | |
| Oxnard, CA | 4,000 |
| **Port Petroleum** | |
| Stonewall, LA | 3,600 |
| **Southwest Petrochemical** | |
| **Rancho Refining Co., Inc.** | |
| Donna, TX | 3,500 |
| **Eddy Refining Co.** | |
| Houston, TX | 3,250 |
| **Mid-America Refining Co., Inc.** | |
| Chanute, KS | 3,000 |
| **Bronco Refining Co.** | |
| Houston, TX | 2,500 |

*Companies controlling from 190 b/d to 2,499 b/d of crude oil capacity:*

**No. of companies: 16; No. of refineries: 16; Total capacity: 22,000 b/d. *(Names on request.)***

**RECAPITULATION:**

**No. of companies: 189; No. of refineries: 324; Total capacity: 18,620,520 b/d.**

# Working Storage Capacity at U.S. Refineries 1980*

(Add 000 bbl.)

| | | Gasoline | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **P.A.D. Districts** | **Crude Oil** | **Finished Leaded** | **Finished Unleaded** | **Blending Components** | **Total** | **Middle Distillates** | **Residual Oils** | **Total Products (a)** | **Total Crude Oil and Products** |
| **P.A.D. District I** | | | | | | | | | |
| Delaware, Maryland | 3,032 | 542 | 342 | 1,089 | 1,973 | 1,339 | 274 | 8,282 | 11,314 |
| Florida, Georgia, North Carolina, Virginia | 3,162 | 296 | 368 | 537 | 1,201 | 1,085 | 1,232 | 4,346 | 7,508 |
| New Jersey | 9,743 | 1,378 | 1,729 | 3,520 | 6,627 | 7,462 | 3,369 | 21,337 | 31,080 |
| New York, New Hampshire | 1,830 | 219 | 217 | 292 | 728 | 1,160 | 1,206 | 4,147 | 5,977 |
| Pennsylvania | 10,058 | 3,602 | 2,504 | 1,014 | 7,120 | 5,771 | 3,607 | 24,218 | 34,276 |
| West Virginia | 286 | 93 | 56 | 0 | 149 | 115 | 57 | 745 | 1,031 |
| **Total District I** | **28,111** | **6,130** | **5,216** | **6,452** | **17,798** | **16,932** | **9,745** | **63,075** | **91,186** |
| **P.A.D. District II** | | | | | | | | | |
| Illinois | 7,540 | 3,610 | 2,582 | 5,723 | 11,915 | 7,050 | 2,367 | 31,631 | 39,171 |
| Indiana | 2,313 | 1,132 | 1,033 | 2,973 | 5,138 | 3,241 | 2,872 | 20,345 | 22,658 |
| Kansas | 3,387 | 2,752 | 1,009 | 2,193 | 5,954 | 3,794 | 1,264 | 17,953 | 21,340 |
| Kentucky, Tennessee | 2,111 | 932 | 477 | 287 | 1,696 | 1,194 | 821 | 5,406 | 7,517 |
| Michigan | 3,128 | 674 | 466 | 412 | 1,552 | 1,868 | 1,111 | 8,310 | 11,438 |
| Minnesota, Wisconsin | 3,257 | 2,293 | 795 | 161 | 3,249 | 2,103 | 1,205 | 9,774 | 13,031 |
| North Dakota | 375 | 337 | 253 | 617 | 1,207 | 798 | 125 | 2,384 | 2,759 |
| Ohio | 3,261 | 2,602 | 1,851 | 2,144 | 6,597 | 3,208 | 720 | 14,637 | 17,898 |
| Oklahoma | 4,057 | 3,747 | 1,674 | 2,017 | 7,438 | 5,557 | 1,088 | 17,885 | 21,942 |
| **Total District II** | **29,429** | **18,079** | **10,140** | **16,527** | **44,746** | **28,813** | **11,573** | **128,325** | **157,754** |
| **P.A.D. District III** | | | | | | | | | |
| Alabama | 1,170 | 178 | 115 | 770 | 1,063 | 865 | 1,360 | 4,313 | 5,483 |
| Arkansas | 1,264 | 104 | 149 | 138 | 391 | 661 | 90 | 1,924 | 3,188 |
| Louisiana | 23,515 | 3,987 | 4,082 | 9,917 | 17,986 | 13,569 | 6,180 | 63,640 | 87,155 |
| Mississippi | 3,754 | 1,444 | 703 | 1,667 | 3,814 | 2,196 | 945 | 8,815 | 12,569 |
| New Mexico | 1,023 | 481 | 226 | 276 | 983 | 574 | 488 | 2,737 | 3,760 |
| Texas | 49,195 | 12,687 | 10,233 | 21,370 | 44,290 | 26,822 | 16,818 | 172,754 | 221,949 |
| **Total District III** | **79,921** | **18,881** | **15,508** | **34,138** | **68,527** | **44,687** | **25,881** | **254,183** | **334,104** |
| **P.A.D. District IV** | | | | | | | | | |
| Colorado | 440 | 591 | 217 | 348 | 1,156 | 375 | 421 | 2,717 | 3,157 |
| Montana | 1,558 | 1,277 | 527 | 1,203 | 3,007 | 1,467 | 274 | 6,375 | 7,933 |
| Utah | 1,235 | 717 | 334 | 1,087 | 2,138 | 1,116 | 498 | 5,254 | 6,489 |
| Wyoming | 1,729 | 1,532 | 623 | 976 | 3,131 | 1,508 | 811 | 8,505 | 10,234 |
| **Total District IV** | **4,962** | **4,117** | **1,701** | **3,614** | **9,432** | **4,466** | **2,004** | **22,851** | **27,813** |
| **P.A.D. District V** | | | | | | | | | |
| California | 30,566 | 5,204 | 6,043 | 10,110 | 21,357 | 7,934 | 17,030 | 71,241 | 101,807 |
| Washington | 7,852 | 1,321 | 1,085 | 1,305 | 3,711 | 1,091 | 984 | 9,761 | 17,613 |
| Other States | 2,842 | 263 | 114 | 661 | 1,038 | 843 | 1,487 | 4,737 | 7,579 |
| **Total District V** | **41,260** | **6,788** | **7,242** | **12,076** | **26,106** | **9,868** | **19,501** | **85,739** | **126,999** |
| **United States, Total** | **163,683** | **53,995** | **39,807** | **72,807** | **166,609** | **104,766** | **68,704** | **554,173** | **737,856** |

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*As of Jan. 1, 1981; (a) total products includes asphalt, road oil, lube oil, propane, butane, jet fuel and miscellaneous items.

## U.S. Primary Distribution System

(Add 000,000 bbl.)

| | | Minimum Operating Inventory | |
|---|---|---|---|
| | **Storage Tank Capacity (9/30/78)** | **Industry Estimate** | **Dept. of Energy Estimate** |
| Crude Oil | 474 | 290 | 294 |
| Gasoline | 443 | 210 | 204 |
| Kerosine | 90 | 35 | — (b) |
| Distillate | 368 | 125 | 117 |
| Residual | 163 | 60 | 60 |
| **Total** | **1,517 (a)** | **720 (c)** | **710** |

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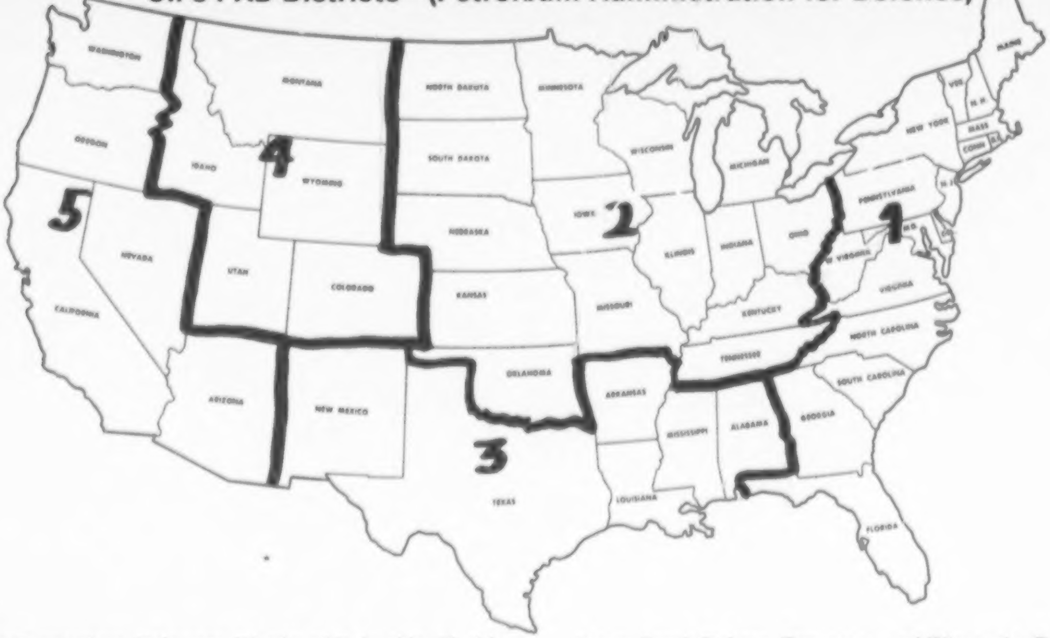
(a) Includes tankage under construction; (b) Includes assumed value of 35-million bbl. for kerosine to equalize industry estimate; (c) Does not include minimum operating inventory of other feedstocks and products.

## Oil and Gas Transportation Facilities

| | **Number of** | **Total Capacity** |
|---|---|---|
| Gas Pipelines (as of 12/31/77) | 331,976 miles | NA |
| Petroleum Pipelines (as of 12/31/78) | 227,060 miles | NA |
| Tank Cars (as of 7/15/79) | 107,552 | 2,175.5 MMgal. |
| Tank Trucks (as of 12/31/78) | 50,010 | 364.4 MMgal. |
| Tank Barges (as of July, 1979) | 3,971 | 71.4 MMbbl. |
| Tank Ships (as of July, 1979) | 352 | 97.0 MMbbl. |

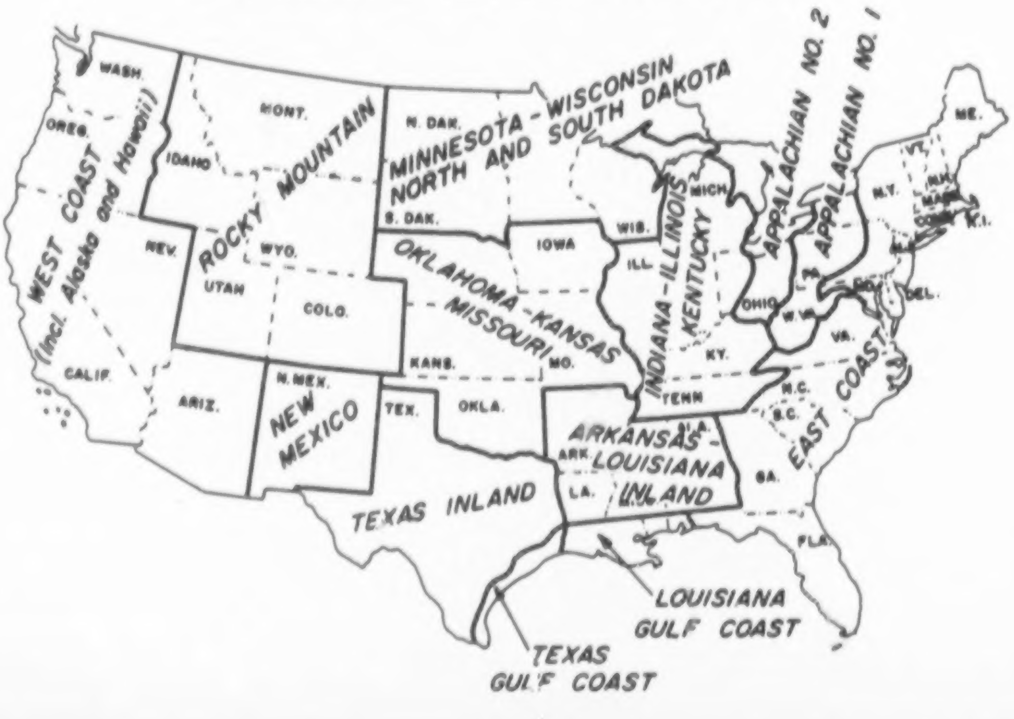
## Oil's PAD Districts—(Petroleum Administration for Defense)


1
2
3
4
5
WASHINGTON
OREGON
CALIFORNIA
IDAHO
NEVADA
MONTANA
WYOMING
UTAH
COLORADO
ARIZONA
NEW MEXICO
NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
KANSAS
OKLAHOMA
TEXAS
MINNESOTA
IOWA
MISSOURI
ARKANSAS
LOUISIANA
WISCONSIN
MICHIGAN
ILLINOIS
INDIANA
OHIO
KENTUCKY
TENNESSEE
MISSISSIPPI
ALABAMA
GEORGIA
FLORIDA
SOUTH CAROLINA
NORTH CAROLINA
VIRGINIA
W. VIRGINIA
PENNSYLVANIA
NEW YORK
MAINE
VT.
N.H.
MASS.
CONN.
R.I.
N.J.
MD.

**PAD 1:** Connecticut, Delaware, District of Columbia, Florida, Georgia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, North Carolina, Pennsylvania, Rhode Island, South Carolina, Vermont, Virginia, and West Virginia; **PAD 2:** Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, and Wisconsin; **PAD 3:** Alabama, Arkansas, Louisiana, Mississippi, New Mexico, and Texas; **PAD 4:** Colorado, Idaho, Montana, Utah, and Wyoming; **PAD 5:** Alaska, Arizona, California, Hawaii, Nevada, Oregon, and Washington.

Source: Energy Data Reports, Department of Energy.

## BUREAU OF MINES REFINING DISTRICTS


WASH.
OREG.
WEST COAST (Incl. Alaska and Hawaii)
IDAHO
NEV.
CALIF.
ARIZ.
MONT.
ROCKY MOUNTAIN
WYO.
UTAH
COLO.
N. MEX.
NEW MEXICO
N. DAK.
S. DAK.
MINNESOTA - WISCONSIN NORTH AND SOUTH DAKOTA
IOWA
WIS.
OKLAHOMA - KANSAS - MISSOURI
KANS.
MO.
TEX.
OKLA.
TEXAS INLAND
ILL.
INDIANA - ILLINOIS - KENTUCKY
MICH.
KY.
TENN
OHIO
ARKANSAS - LOUISIANA INLAND
ARK.
LA.
ALA.
APPALACHIAN NO. 2
APPALACHIAN NO. 1
W.V.
PA.
N.Y.
VT.
N.H.
ME.
MASS.
CONN.
R.I.
N.J.
DEL.
VA.
N.C.
S.C.
GA.
FLA.
EAST COAST
LOUISIANA GULF COAST
TEXAS GULF COAST